

VIEW OF THE COURSE IN THE STADIUM AT ATHENS.

ART AND ARCHAEOLOGY

LXXXIII, No. 3

MAY-JUNE, 1932

THE ARCHAEOLOGICAL SOCIETY OF WASHINGTON

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ART AND ARCHAEOLOGY

An Illustrated Bi-Monthly Magazine

Published by THE ARCHAEOLOGICAL SOCIETY

OF WASHINGTON,

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ARCHAEOLOGICAL INSTITUTE OF AMERICA

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VOLUME XXXIII

MAY-JUNE, 1932

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Contents of previous issues of Art and Archaeology can be found by consulting the Readers' Guide and the Art Index in your library.

TERMS: \$5.00 a year in advance; single numbers, \$1.00. Instructions for renewal, discontinuance, or change of address should be sent two weeks before the date they are to go into effect.

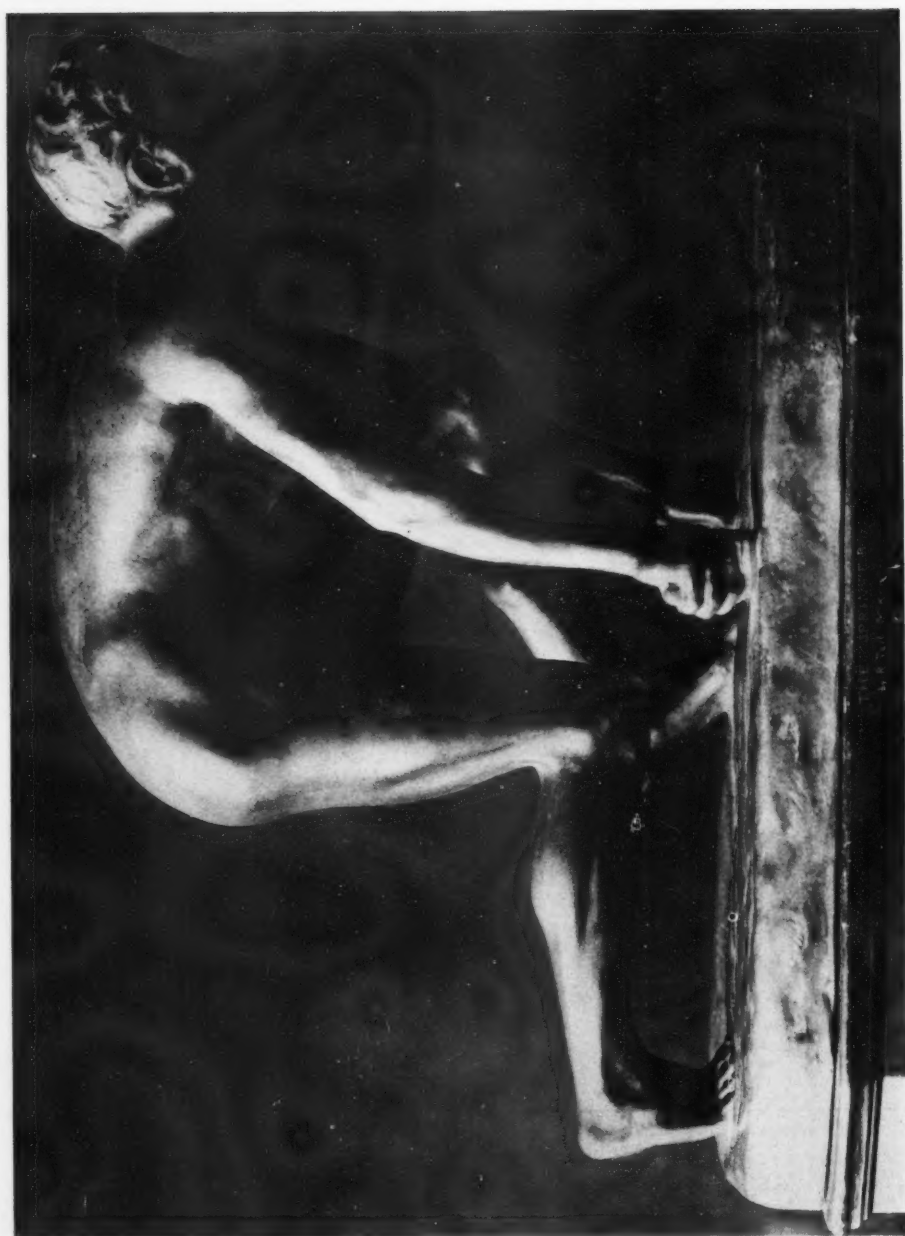
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Advertisements should be sent to the Advertising Manager, Art and Archaeology, The Southern Building, Washington, D. C.

Entered at the Post Office at Washington, D. C., as second-class mail matter. Acceptance for mailing at special rate of postage provided for in section 1103, Act of October 3, 1917, authorized September 7, 1918.

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ART *and* ARCHAEOLOGY

The Arts Throughout the Ages

VOLUME XXXIII

MAY-JUNE, 1932

NUMBER 3



BROTHERS OF THE WIND.

THE ATHLETE IN SCULPTURE

By R. TAIT MCKENZIE, R. C. A.

FORTY years ago, Baron Pierre de Coubertin dreamed a modern Olympic festival; and in 1896 in a marble-lined stadium the games were celebrated at Athens after so many centuries of oblivion.

The last thirty years have witnessed a revival of interest in them and a widening of competition that has made the original games seem like a parochial picnic.

In the last games at Amsterdam in 1928 more than fifty nations were represented. Europe, Asia, Africa, America, North and South, with the Islands of the seas, sent their athletes, white, black, brown and yellow, in this great international week of athletic competition.

Next August in Los Angeles before eighty to one hundred thousand spectators, comfortably seated in the great stadium built for the purpose, the Tenth Modern Olympiad will be celebrated. What a contrast to the hillside on which the ardent Greek crowd stood to see their compatriots compete!

We are now in the era of stadium-building. In Europe, France and Germany are replacing the old walls and fortifications about their cities by playing fields and stadiums, and Italy has a grandiose plan for one in Rome to seat 130,000 people. It is to be decorated by 92 groups of statuary, each presented by a province and dedicated to Mussolini. The United States are studded

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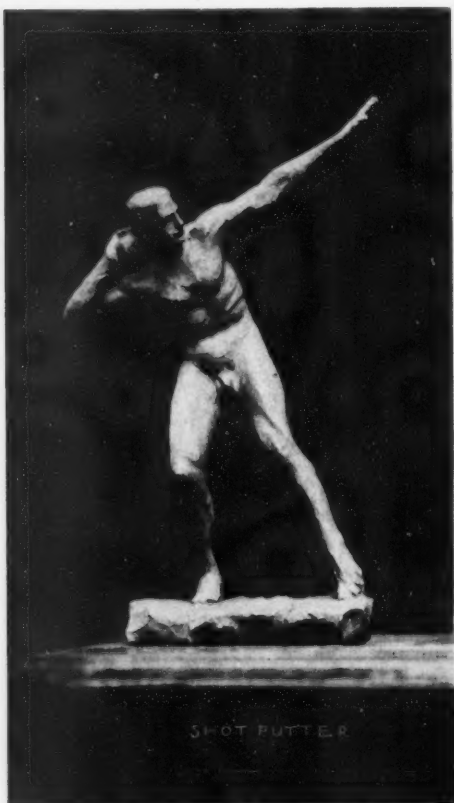
SHOT PUTTER, "THE HOP".

by stadiums ranging in capacity from fifty to one hundred thousand people; and the Intercollegiate Track and Field Championships, and the two-day Relay Carnival at the University of Pennsylvania with its three thousand competitors, as well as other such contests, attract nation-wide attention.

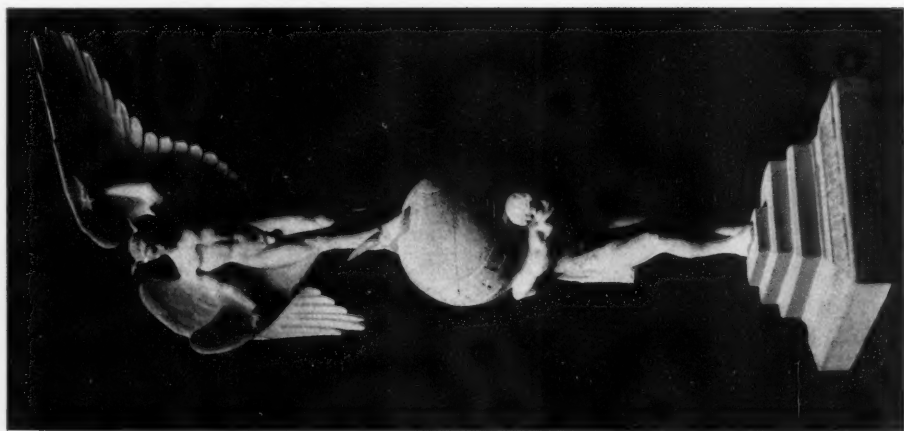
This is but a tangible indication of the revolution that has taken place during one lifetime in our ideas and habits of life. Games and sports were struggling for a place in the sun at our schools and colleges fifty years ago. Some think that they now take it all and leave the scholastic side too much in the shade. It is only twenty years ago that the school yards and playgrounds were recognized as possible places for organized games and competition, and the growth of summer

camp and outdoor life have given us back the cult of physical freedom and the athletic life. The nude or near-nude requires no cultivation in America. It is taken for granted at the beaches and camps from Maine to Florida, as a consultation of the weekly magazines will clearly reveal.

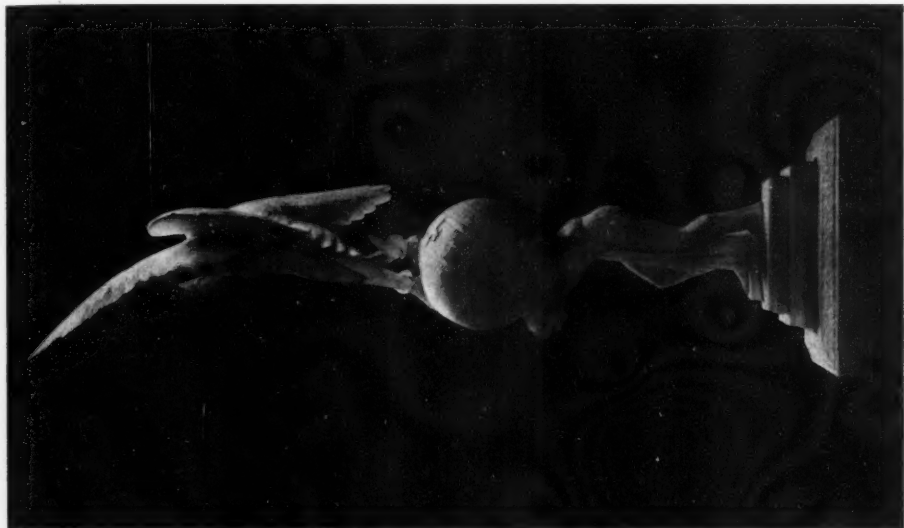
Why is it that this great movement has had so little expression from the painter and sculptor? Sculpture is the medium peculiarly suited to portray athletic action. Sculptors have always chosen the human body at rest and in action as the instrument for expressing their ideas, and nothing is more beautiful than the figure in the flower of its youth showing its strength, grace, and agility in the



SHOT PUTTER "READY".



THE TRIUMPH OF WINGS.
FRONT VIEW.



THE TRIUMPH OF WINGS.
SIDE VIEW.

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sports and games of the playing field, swimming pool, and gymnasium. The Egyptians of 3000 B. C. recorded the grips and holds of their wrestlers with a completeness that baffles us even yet; and a steady stream of great works with athletics as their motif marks the progress of Greek art from its portrayal of the athletic gods of Homer till it faded into that of Rome.

The inspiration of this great movement in art was unquestionably the outdoor life led by the young men and girls of Attica and Sparta, for the love of athletics distinguished the Greek from the barbarian. Sculptors had thenude body in action before their eyes continually, but the prestige that attended success in the great festivals at Corinth, Delphi,

Nemea, Athens, and Olympia was another great stimulus. There, statues of the heroes of the games studded the grounds, and their praises were sounded in verse and story.

These games attracted the fair, curly headed shepherds from the highlands of Arcadia and the darker skinned landsmen and seamen from the cities and from the islands and colonies of Greece. All competitors were of pure Greek blood. At their height the Olympic Games drew their competitors from

the eastern end of the Mediterranean only, and not more than forty thousand spectators stood on the slopes of Mount Kronos to watch the contests.

We lean heavily on the fifth and fourth century Greek ideals for our art in spite of modernistic attempts to substitute the cult of Benin or Easter Island, and never more so

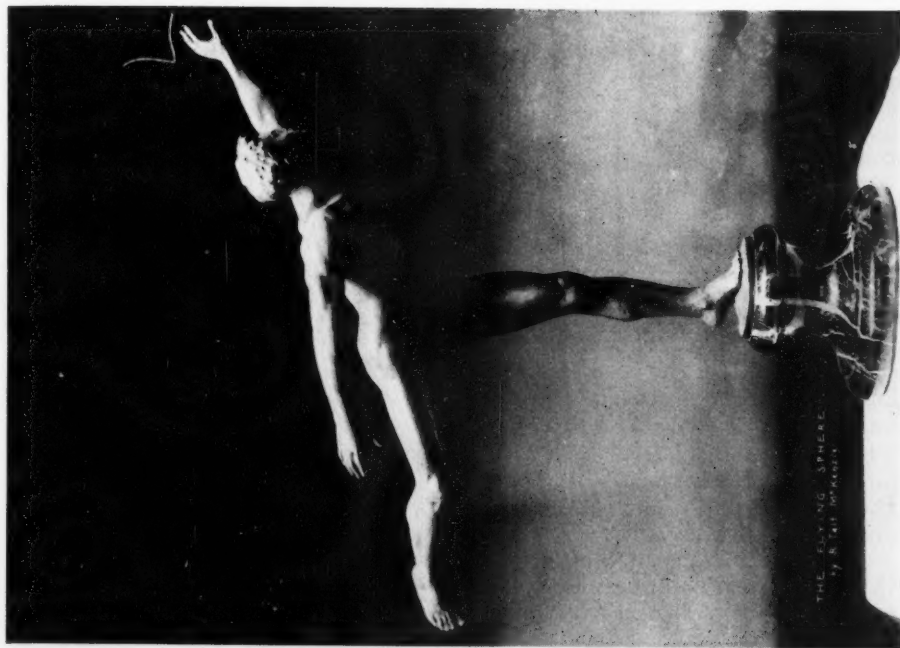
than in our interpretation of the youthful figure in action or at rest. But our portrayal of the athletic youth is totally inadequate to express the significance of this great renaissance in which we are unconsciously living.

The modern athlete has already made his own contribution to the possibilities for sculpture that should be celebrated and not overlooked or forgotten. Since

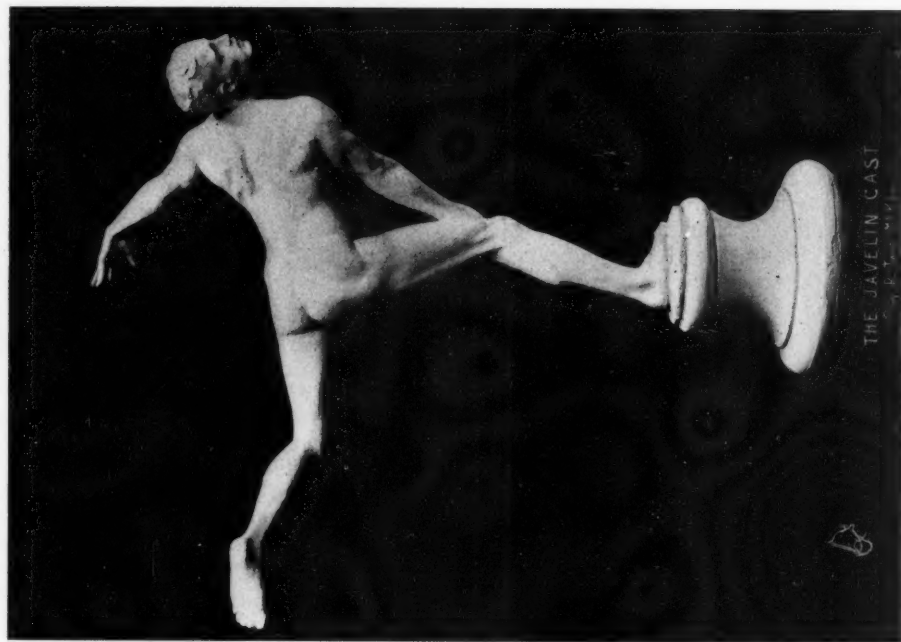
the beginning of time, athletes started a race from a standing position with but slight variations as shown in the vase-paintings of 500 B. C. and the photographs of 1880; but in 1888 Charles H. Sherrill, a Yale student, stepped back of the starting line, stooped forward, and put his hands on it, planted his feet six inches apart and 30 inches behind the line; and made the unexpected discovery that the thrust from both feet in this position, apparently unfavorable, gave him a quicker start



THE ICE BIRD.



THE FLYING SPHERE.



THE JAVELIN CAST.

ART AND ARCHAEOLOGY

than the time-honored pose; and so was invented the "crouching start" now universally taken by athletes and giving a beautiful and graceful combination of lines and mass for the sculptor.

The Greeks had little thought that an athlete by the aid of a pole would ever clear an obstacle at the incredible height of 14 feet, and yet the modern athlete has done this and is doing it, and has presented to the trained eye of the sculptor a series of graceful and beautiful poses of flight that are a delight to the eye.

The modern high-jumper has exercised an ingenuity of style in the "Reverse", the "Rollover" and the "Scissors" that give it a thrill the Greeks never had.

The modern athletic program has other events peculiar to itself. Heaving the 56-pound weight for height by a handle is an Irish contribution. Throwing the hammer, first practiced on the village greens of Scotland, and the putting of the "shoulder stone", is now standardized into the 16-pound shot-put from a seven-foot circle. This shortening of the approach from one at first limited only by the breadth of Scotland has given rise to a series of evolutions and poses that are peculiarly sculptural from the first stance through the hop and reverse to the final bird-like pose held for an instant after the shot has left the hand.

The javelin-throw shows a pose almost identical after the missile has been hurled, although the modern athlete holds it by the shaft and not by the loop or *amentum* as shown in the vase-paintings of Attica.

But it is in the discus that the greatest diversity of style appears.

When the Olympic Games were revived at Athens in 1896, the scholars and archaeologists tried to reconstruct the style in which the discus was thrown by the scattered references from Lucian, Stratius, Philostratus, and others; and from the statues, statuettes and coins that have come down to us headed by Myron's *Discobolos* with its disputed restorations of the head. They made sorry work of it with their Hellenic style,

whose restrictions were soon cast aside, and the modern athlete has made use of his imagination to work out the way that seems to him most effective. The misunderstanding of the scholars seems to have been caused by the assumption that the discus was bowled underarm, a mistake founded on the misread-

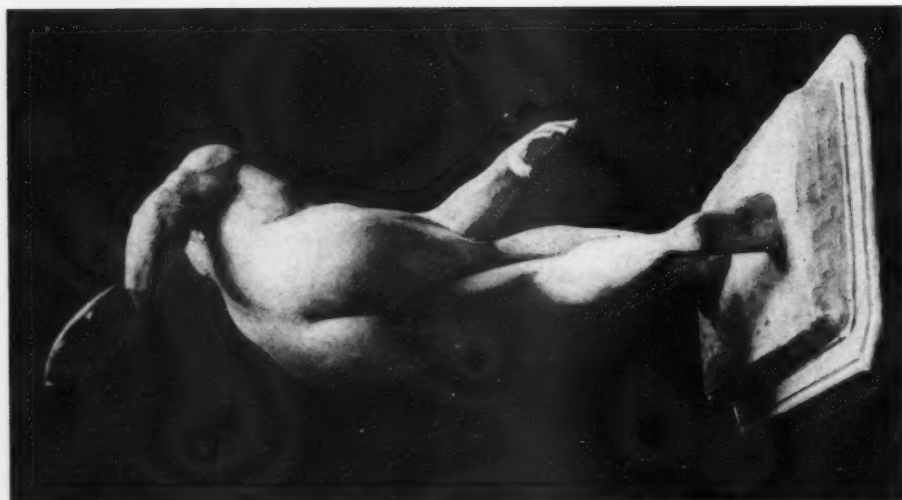


THE POLE VAULTER.

ing of Myron's statue, which does not by any means require this for its interpretation. It is very probable that it always was delivered with a circular sweep from a stand, or "scaled"; but it is also improbable that a preliminary turn was used as is the case at present to give additional speed to the final



THE UPRIGHT DISCUS THROWER.



MODERN DISCUS THROWER.
BACK VIEW.



THE MODERN DISCUS THROWER.

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swing, thus increasing the distance by ten to twenty feet.

On analyzing the *Discobolos* of Myron we find two points hard to explain: (1) the turning backward of the head, and (2) the dragging of the left foot. The head leads in any forward movement and usually anticipates the direction of a throw. This is universal in sports and is why it is so difficult for the

golfer to keep his eye on the ball till it is hit. He instinctively anticipates the direction he hopes the ball will take by his glance, and so tops his ball. The gunman who shoots from the hip looks at the object to be hit and not at his weapon. For that reason I like the "improper" restoration of the *Discobolos* with its head forward, seen in the British

Museum copy, better than the more authentic Lanciolotti version in which he looks back at the discus. It is more in keeping with the spirit of the movement. The dragging of the left foot would indicate that it is being brought forward as if to counterbalance the forward swing of the right arm, and after the discus is delivered the right foot again would be advanced.

In the Hellenic style it was ordained that the right foot be kept advanced and the stance unchanged until the discus was bowled, a foolish restriction.

One summer I spent my daily hour on the

beach experimenting with the discus. I was accompanied by an accomplished athlete and we tried many variations on the accepted style of throwing with and without the turn. The result was the *Modern Discus Thrower*.

I have chosen the same "moment" of the throw as that taken by Myron—the pause between the backward and forward swings. It shows certain radical differences. The body

is more crouched, so that the elbow of the left arm is opposite the right knee, whereas in Myron's it is the wrist. The left foot is pushing instead of dragging, and the head is turned sharply forward and to the left, looking in the direction of the throw. The arm is across the back and the hand in pronation, a position of the hand shown in sev-



THE OLYMPIC BUCKLER. TO BE EXHIBITED AT THE GAMES IN LOS ANGELES.

eral Greek drawings and taken by about fifty percent of the modern experts in the feat. This spiral movement of the body shows better from the back view.

The rotary or spinning action of the throw has its speed increased by the complete turn of the body before the final throw is made. The evolution of the discus throw is still far from complete; and at any time an ingenious modern athlete may discover some new refinement of movement or radical change in mechanical action under the stress of international competition that will revolutionize the technique.

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THE PLUNGER.

A number of athletes keep the body almost upright and rely on the speed of the turn and the sudden straightening of the knees to get distance and elevation, giving a fine sculptural composition quite different from the traditional pose. The circular movement is too valuable to be discarded, and we owe that to the blacksmith's hammer thrown on the village green.

Perhaps the most interesting race in the modern program is one the Greeks never saw—the flight of the hurdlers. The impression of this race is admirably described in Wharton Stork's sonnet on the medallion *The Joy of Effort*, the original of which is placed in the wall of the Stadium at Stockholm to commemorate the Olympic Games of 1912.

"THE JOY OF EFFORT"*

By CHARLES WHARTON STORK

*Eager as fire, impetuous as the wind,
They spurn the ground and lightly clear
the bar.*

*Three racers? Nay, three strong wills un-
confined,*

*Three glad, contending swiftnesses they
are:*

*Three dolphins that with simultaneous leap
Breast the high breaker of a tropic surge,
As flashing silvery from the purple deep
And scattering foam, their curving backs
emerge;*

*Three agile swallows, skimming near the
ground*

*That give their bodies to the buoyant air;
Three roebucks fleet that through the forest
bound.*

*Yet how can even such with men com-
pare?*

*Not with mere pride of strength are these
alive;*

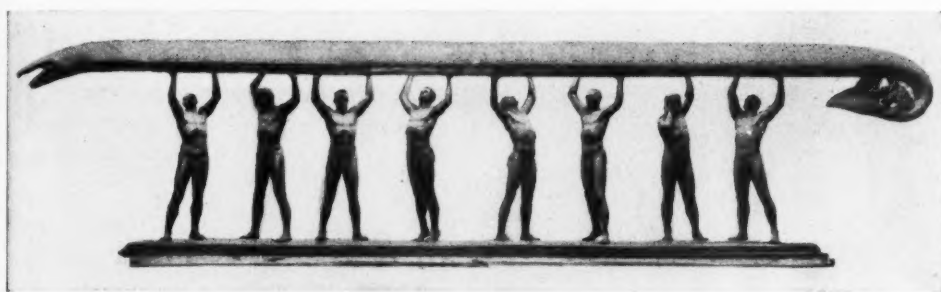
The noblest joy of being is to strive.



THE JOY OF EFFORT.

Swimming and diving were part of the daily life of the Greeks; but we have no records of competition in them as part of their athletic program. In the modern Olympic

*Reprinted by special permission of *The Century Magazine* to Dr. McKenzie.



THE EIGHT.

Games, water sports have a section to themselves and bring competitors from all over the world. The flight of the diver, and the flat plunge of the racer each lends itself to the sculptor's interest.

The rhythmic sweep of the oars in a college eight was a sight the men of Attica never saw, although the Athenians had their own regattas and torch or relay races on foot and on horseback.

The winter sports that formed an Olympic festival of its own at Lake Placid this year introduced a whole new series of actions that were withheld from the games of the ancients by climatic conditions: the flight of the ski-jumper, the curving swing of the figure-skater with his birdlike swoop and leap, are charged with grace and beauty; and the flashing, kaleidoscopic dash of the hockey-players on the ice give a new zest to the lover and interpreter of skill and speed.

It would take one too far afield to cover the age-honored sports of boxing, wrestling and fencing, the more modern golf and tennis, and such purely modern team-games as football, baseball, and basketball, the last a game deliberately invented in 1895 to fill a definite want on the program of sports and now played all over the civilized world. All are full of inspiration for the sculptor.

Wherever untrammelled youth is found, in camp, field, beach, or gymnasium; on land or in the river, lake, sea or swimming-pool, there should be the sculptor with his appraising eye, his cunning hand, and his will to record his impressions, if an adequate interpretation is to be made of this great renaissance of athletic competition in which we are living for the most part unconsciously and too often with an unseeing eye.

THE STADIUM AT ATHENS

The picture of the Athens Stadium reproduced on this page shows the present structure, constructed in 1896 and following years on the site of the original edifice laid out by the orator Lycurgus in B. C. 330. In the old structure the Panathenaic Games (not the Olympic Games) were held. When the decision was reached by the Greek Government in the '90s to reconstruct the Stadium and rejuvenate the Olympic Games, this time in the Capital instead of at Olympia, the engineers utilized the Roman ruins of the arena begun over the ancient Greek stadium in A. D. 143 by Tiberius Claudius Herodes Atticus, a wealthy and public-spirited Roman citizen of Athens who did much to embellish his city. The arena as it now stands measures about 679 feet in length by 109 in width; the marble seats accommodate some 44,000 spectators. It is interesting to compare the size and form of the Athenian Stadium with structures of similar purpose



in the United States, especially in this year of the Olympic Games at Los Angeles.



INTERIOR OF CAVE XXVI SHOWING THE *DAGOBA*.

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THE CAVES OF AJANTA; INDIA'S PREMIER ROCK TEMPLES

By E. ROSENTHAL

SOME of the most intriguing of India's art treasures are the cave temples excavated by the devotees of old. They fought shy of natural caverns which meant rotten rock that might come tumbling about their heads, and had recourse to manual labor only, pitting their strength and ingenuity against stone free from fissures. In the Ajanta gorge, hidden in a fold of the Indhyadri hills, Buddhist monks labored from the second century B. C. to the seventh century A. D., and their handiwork reveals the development of every style of Buddhist art. These hills lie to the south of the Vindhya mountains, the natural frontier between central India and the Deccan or "Southland".

The Ajanta caves are self-divided, by reason of their content, into two series. The first, excavated by the early Hinayana Buddhists, are austere and dignified; the second, the product of the Mahayanists, who commenced to influence the architecture of the caves probably about the second century A. D., are one long crescendo of pictorial and sculptural embellishments leading to a climax of elaborate beauty in Cave XXVI, to which the finishing touches were imparted in the seventh century. Buddha is believed to have died in the fifth century B. C. and his first followers, the Hinayanists, did not dare fashion an image of the Master. This prejudice, however, was quashed by the Mahayanists, with the result that the effigy of Buddha became the head and corner-stone of their sanctuary embellishments.

The numeration of the caves is helpful for purposes of description, but the numbers have no chronological importance, having been affixed merely to facilitate guidance and description. The caves are of two categories, *chaityas* or cathedrals and *viharas* or monasteries. Of the grand total of twenty-nine, only five are cathedrals, the remainder

having served as residences for friars and students, in the days when Ajanta was a university. A prominent feature of each *chaitya* is the *dagoba* or imitation reliquary mound, a replica of the monuments or burial mounds built over the ashes of Buddha. In Cave IX, probably the oldest *chaitya* at Ajanta and, indeed, one of the earliest in western India, the *dagoba* is a plain cylinder, five feet high, surmounted by a dome. This grand old sanctuary dates from 100 B. C., at which period excavators were afraid to trust in the staying power of rock independent of wooden supports. They fitted their roofs, therefore, with wooden ribs, while cutting the pillars to slope inwards, after the manner of pliable wooden props, so as to resist the thrust of the circular roof, and splaying the door-jamb with a view to solidity. These overcautious cave-cutters learned but gradually to straighten their columns, consequently the angle of pillar and door-jamb is a reliable indication of the age of an excavation.

Like its successors, Cave IX possesses a magnificent horseshoe window through which the light falls direct on to the *dagoba*, illuminating it as efficiently as any modern electrical device. There are a few remains of painting in this cave—shreds and patches of at least three different styles. From out the criss-cross of faded coloring there emerges a cowherd following his cattle with a joy of life that has defied time's onslaught. The artist obtained his effects with the minimum of outlines, and achieved a masterpiece that is unforgettable.

In Cave XI, we establish contact with a Buddhist monastery or *vihara*. A good water-supply that does not dry up in the blistering May sun was essential for a monastic residence, and the mountain stream at the foot of the gorge must have been one of the

ART AND ARCHAEOLOGY

prime factors in the devotees' selection of this site. A stone bench along one wall is a not uncommon attempt at early furnishing in terms of excavation, while carefully hewn Buddhas at each end of the veranda indicate that the monastery was not completed until possibly the fourth century A. D., when the

Pre-Gupta and Gupta styles. The former, which was superseded about 320 A. D., was characterized by clumsy images and avoidance of florid scrolls, whereas the latter comprised figures that were part and parcel of the decorative motives and were truly ornamental and reposeful.

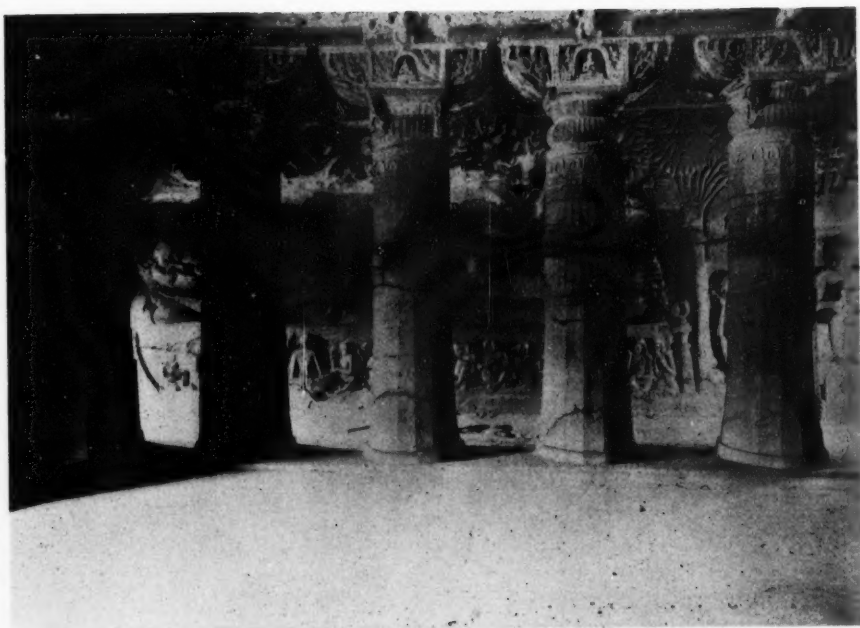


A GENERAL VIEW OF THE AJANTA GORGE.

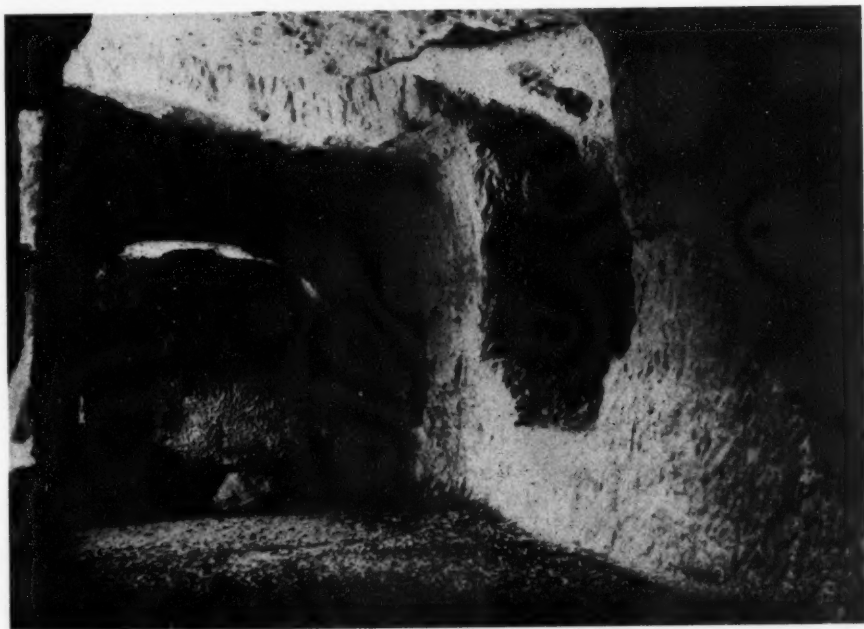
Mahayanists were at the Buddhistic helm. The Buddha in the shrine is detached from the back wall and seated on a lion-throne, while among emblems that stress the sanctity of this central figure are a *cakra* or "Wheel of the Law", and two deer. Buddha as *Cakravati* was the Great Being who made his chariot wheels run smoothly over the Universe, and the deer are symbolic of the Deer Park in which Buddha preached his first sermon.

The Ajanta caves afford vast scope for becoming architecturally acquainted with the

In 319-320 A. D. a certain rajah of Pataliputra, the ancient capital buried under Patna City, assumed the title of Chandragupta, greatly extending his dominions, and his descendants, who likewise took a hand at map-making, acquired hefty slices of southern India. The Guptas gave to India an art from which all corners of primitiveness had been removed, and the Ajanta caves of the Gupta period—320-600 A. D.—are maturely sumptuous. The monasteries XVI and XVII and the cathedral XIX are all Gupta creations, and their strength is synthetic—the



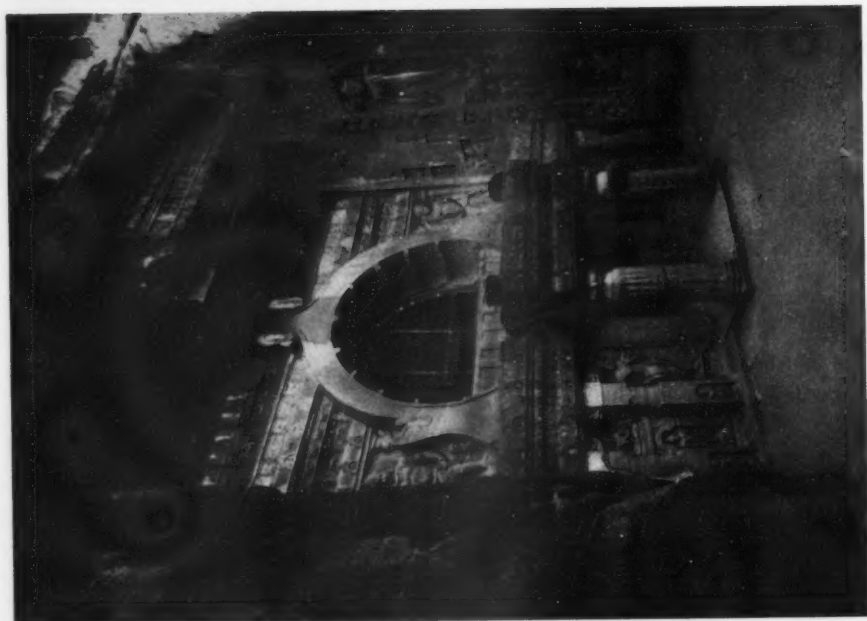
THE NIRVANA BUDDHA IN CAVE XXVI.



A CAVE IN THE MAKING.



EXTERIOR OF CAVE XXVI.



EXTERIOR OF CATHEDRAL CAVE XIX.

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THE DAGOBA IN CAVE XIX.

strength of the skillful blend in which sculpture and painting divide the honors equally.

Compared with the Buddhist paintings of Tibet, Nepal, China and Japan, the Ajanta frescoes are noteworthy for their natural contours. To the artists in this cave-city life was good, and they gladly warmed both hands at its fires, revelling over the reproduction of objects which they admired, of incidents which gave them pleasure. In their opinion woman was Nature's supreme masterpiece, and they immortalized her with loving admiration, utilising her decorative properties with consummate skill. The Ajanta woman interprets emotions eloquently by the poise of her supple body, by the gesture of her slender fingers, and her presence idealises the most commonplace happenings, for into the smallest measure of space she intrudes a sense of beauty's infinitude.

Most of the frescoes have for subject matter either events in the life of Buddha, Prince Gautama, or incidents in the Jataka book, that compilation of tales referring to Buddha's previous incarnations. Siddhartha Gautama was the son of Suddhodana, a chief of the Sakyas, an Aryan tribe whose headquarters were at Kapilavastu, about 130 miles north of Benares. Siddhartha's mother died a week after the baby's birth, but the infant was tended lovingly by Suddhodana's other wife, who was childless. Siddhartha ran great risk of becoming one of the world's most pampered darlings, but his was no "luxury-complex", material comfort irked him, and his desire to embrace a hermit's life came to a head after his marriage and his wife's first confinement. He felt that his son would become a powerful link in the chain that bound him to pomp and

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THE EXTERIOR OF CAVE IX SHOWING SCULPTURED FIGURES.

pleasure. Therefore at the age of twenty-nine he made his "Great Renunciation", escaping by night from wife, child, all that he held dear, to become a beggar.

One of the paintings in Cave XVI illustrates the casting of the horoscope by the seer Asita, who declared that Siddhartha would become a renunciant, a prognostication entirely objectionable to King Suddhodana, who would have liked his boy to develop into a normal young man, without a disconcertingly sensitive conscience. Another represents Gautama as a schoolboy, astonishing his master by his miraculous acquaintance with systems of writing of which the teacher knew nothing. He is also depicted in his mystic trance or "First Meditation", and as a semi-prisoner in his palace where the last word in sumptuousness was vocal. On the cave exterior is one of the most important inscriptions at Ajanta, for it bears reference to the Vakata dynasty, believed to have controlled Telingana, the Telugu-speaking section of the Deccan, in the sixth century A. D. The temple was excavated by a minister of the Vakatakas, in the sixth century, to judge from the characters employed, and was presented to the community of monks. One feature of the decoration is a *Naga Raja* or "Serpent King", seated upon the coils of a cobra, whose hood overshadows

the monarch. According to certain savants, snake-dynasties flourished in India from the seventh century B. C. to the fourth century A. D. Consequently the serpent folk represented at Ajanta, bridge the gulf separating us from those queer serpent-worshipping converts to Buddhism, whose tribal ensign was the hooded cobra.

Outside Cave XVII, there is a delightful chiselled tableau, "The Offering of the Handful of Dust", illustrating Buddha's prophecy respecting Asoka who, about 250 B. C., made of Buddhism a state religion and promulgated Gautama's tenets throughout India. In the carving Buddha is a beggar to whom two urchins wish to make an offering. They are, however, as poor as Buddha himself, the only gift they can muster being a handful of dust. To reach Buddha's begging-bowl one youngster mounts on the shoulder of his playmate. Infinitely touched by the



OFFERING OF THE HANDFUL OF DUST ON THE EXTERIOR OF CAVE XVII.

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MOURNING FIGURE OF ANANDA AT THE FOOT OF THE NIRVANA BUDDHA IN CAVE XXVI.

children's piety, Buddha predicts that in a future incarnation the donor will be King Asoka, and the lad who supported him Asoka's minister, Radhagupta.

Cave XVII is a fine monastery that has been nicknamed "The Cave of the Zodiac" owing to a circular painting representing the "Wheel of Life". This ornate design originally contained a very large number of diminutive human figures between the spokes, and the execution is superb. On the adjacent wall is a fascinating picture of a royal couple philandering on a couch such as is found in Indian houses today. Exquisitely coy is the lady as, with head on one side, she listens with half-closed almond-shaped eyes to her ardent lover. She seems crushable as a flower when compared with the muscularity of Western women, whereas her attendants are stockier of figure and coarser of feature. Excavation XIX, the next important cave, is a specimen of a cathedral completely lithical in conception for, at the time of its manufacture, about the middle of the sixth century, wooden models were out of favor. Moreover, Buddhist figures are everywhere conspicuous. For the most part they are uniform in design, but in their pristine glory when freshly painted they must have produced a marvellously effective color symphony.

The final group of twelve caves comprises the first five temples from the western end,

and the last seven from the opposite end of the rock wall in which they are hewn. Some may have been commenced in the sixth century, but none probably were finished until a hundred years later.

Cave I is a large-scale monastery, with a main hall sixty-four feet square, supported by a colonnade of twenty pillars, aisles nine feet six inches wide and a veranda measuring sixty-four feet by nine feet three inches, by thirteen feet six inches. The columns are a sculptural orgy as to design and figure work, and their carved embroidery includes delicate replicas of beads in festoons, in triple rows and with pendants. There are numerous cells for the former residents of this Vatican of the East. The shrine-door is a most elaborate affair with layer upon layer of carving, comprising human forms interlaced with exquisitely-hewn foliage. Images of the sacred rivers Ganges and Jumna are conspicuous, for these were a characteristic architectural feature and were often used as guardians.

The painted Buddha at the back of the Caves is startling in its grandeur. Professor Cecconi, the Italian art expert, wrote of it:

"In Cave I the colossal figure of Buddha, nearly immune from varnish, evinces a surprising portrayal of art on account of its pictorial qualities: this painting, in its grandiose outlines conjures up visions of the figures of Michelangelo in the Sistine Chapel; while the clearness of the flesh-coloring, so true to nature, and the transparency of the shadows are very like those of Coreggio. The design and expression of the face are amazing, the breadth of the technique, and the realistic interpretation of the hands permit of a comparison with the two great artists of the Italian Renaissance."

Close to the shrine is an unforgettable color-representation of the "Temptation of Buddha". After Siddhartha had left his

ART AND ARCHAEOLOGY

home and done penance for six years, he was racked with doubt as to the efficacy of exaggerated asceticism. In Cave I he is depicted with legs folded, and right arm outstretched, repelling evil. Behind his head there is a sort of halo, probably formed of the foliage of the Bodhi tree, the *ficus religiosa* or "Tree of Enlightenment". Half leaning against a column is a woman in a provocative attitude, possibly the daughter of Mara, the Prince of Evil, who dogged Siddhartha's steps after the "Holy One" made his "Great Renunciation", promising him a universal kingdom if he would consent to abandon his search after truth. Buddha remained adamant despite the foul fiends summoned by Mara, which are represented on the monastery wall. The Earth Goddess invoked by the Great Being defended him and the Buddhist Mephistopheles, frustrated in his hellish design, departed as disgruntled as his devilish attendants.

Although not so large as Cave I, the neighboring Cave II is also an artistic treasure-house containing some of the most noted masterpieces in the Ajanta gallery. One of these illustrates the tragic punishment of a beauty who tripped on her path through life, succumbing maybe to the "human need of loving". She is about to pay the price for her fault and kneels at the feet of her lord and master who, with unsheathed sword upraised, is about to kill her. The eloquent droop of her body, the agony depicted in her tender little hands—her face is hidden—denote her terror with realistic refinement of rarest texture. Some of her sisters in Cave II have been likened by M. Axel Jarl to kinswomen of the maidens in Botticelli's *Primavera*, and on one of the walls is a superb "Buddha of the Future", richly apparelled, attended by women holding fly-flaps and encircled by worshippers. There is immense strength in the grouping, and the curtain hung by time over Ajanta art-works lifts as one gazes at this masterpiece. Fragments of painted inscriptions indicating gifts by friars constitute interesting links with the early ages of faith. The frescoed records of Siddhartha's life-story are quite delightful, and



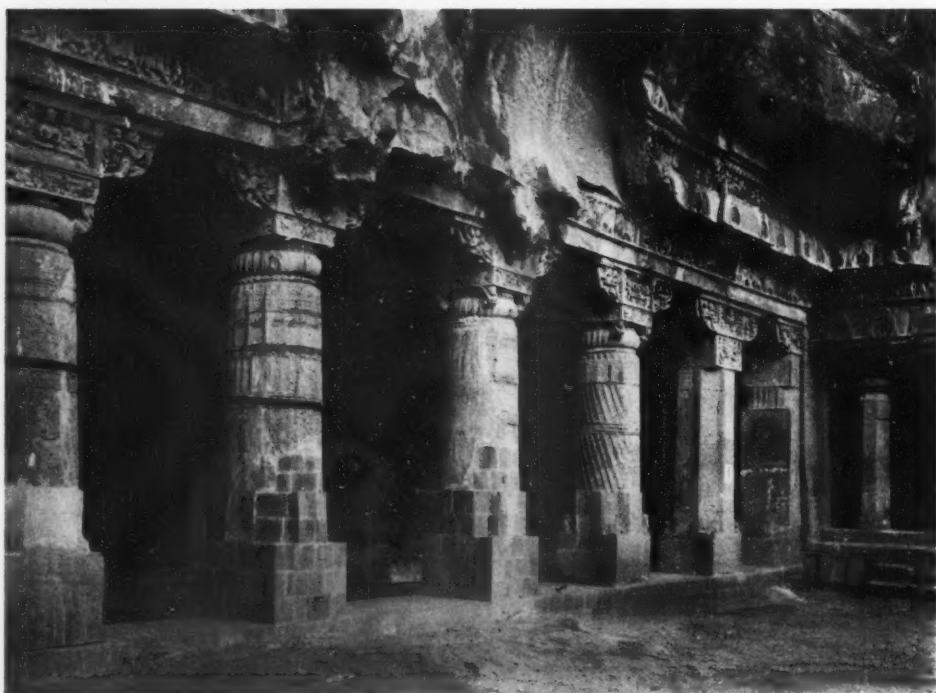
THIS PAINTING, WHICH MAY POSSIBLY BE BUDDHA'S WIFE, WAS FOUND IN CAVE I.

include an illustration of Queen Maya's dream regarding the birth of her illustrious son Siddhartha.

In Cave XXVI there is a mammoth representation of *Nirvana*. Buddha, who has conquered sin, extinguished passion, and whose



CAVE IV, SHOWING THE VERANDA AND CEILING.



EXTERIOR OF THE MONASTERY CAVE I.

reincarnations are concluded, through cumulative virtue is about to enter *Nirvana*, the goal of every Buddhist, where future existence and the pain associated with life are no more. The recumbent Buddha, twenty-eight feet three inches long, reclines on a couch with head turned towards the north for as the fifth century Chinese pilgrim Fa Hian recounted:

"It is to the north of Kusinara that the 'Illustrious Sage of the Age', his face turned towards the north, entered *Nirvana*."

Kusinara has been identified with Kasia near the Nepalese frontier, not very far from the Lumbini Garden, now called the *Rummin Dei*, in Nepal, the site of Buddha's birth. At the feet of Buddha is seated the mourning Ananda, Siddhartha's cousin, who was converted to Buddhism, becoming one of its

staunchest supporters, while further along is a graven tableau of Buddha's temptation, as detailed and vital as the pictorial illustration in Cave I. The decorators must have been experts in the manipulation of reflected light, for without some contrivance, such as a metal sheet and white cloth fixed at the entrance of the sanctuary to reflect the rays of the sun, it is impossible to illuminate the wall surface. Lighting, indeed, was one of the most vexing problems the cave-embellishers had to solve, and it is almost unbelievable that their slow and elaborate labor could have been accomplished in the dim recesses of the sanctuaries solely by the inefficient aid of torches. The chief feature of XXVI is the excessive multiplication of the images of Buddha which, from their style, cannot have been completed earlier than the seventh century. There are twenty-six columns in the

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GEOMETRIC DESIGNS ON MIMBRES BOWLS

By ALBERT ERNEST JENKS

WHEN in February, 1930, I showed photographs of fifty Mimbres bowls to Dr. Solomon Reinach, at the Museum of Saint Germain-en-Laye, France, he said there is no other ancient geometric art, prehistoric or historic, known to him which can compare with the Mimbres art in conception and execution of geometric designs. He said the Mimbres artists were unquestionably superior to the Greeks in the field of geometric art.

In April, 1930, I presented many of the same illustrations in an address before the International Archaeological Congress, meeting in the city of Algiers, North Africa. The reception given that display of Mimbres art was equally favorable. The art was so surprising and superior that savants came again and again, on succeeding days, to look at the craftsmanship of the prehistoric American artists.

There are a score of bowls from our Galaz Ranch site, on Mimbres river, near Mimbres Hot Springs, New Mexico, which are truly remarkable in geometric conception and execution. I here present one of them. There are four pictures of the design. The first shows the bowl standing on its base, with the design spread inside the rim. The picture presents a trifle more than one-half of the pattern around the rim of the bowl. The second picture is a vertical view of the pattern as one looks directly into the interior of the piece. It is, of course, distorted by the form of the bowl. The third picture is a present-day drawing of the pattern. The fourth presents in isolation one of the four repeated units of the pattern. Careful comparison of the first and second pictures with the third and fourth will show that the line-work of the Mimbres artist is truer than that of the modern artist who drew the pictures shown in Figures 3 and 4.

The bowl is our number 29. It is ten inches in diameter and four and one-half inches

deep. It was recovered July 3, 1929, in room number 6—a room of the sixth or last phase of Mimbres culture. The bowl was over the cranium of our skeleton number 25. It was at a depth of two feet six inches beneath the ground surface. The skeleton was of an adult, but it was too badly disintegrated to be further identified. In room 25 there were four skeletons and seven bowls.

The geometric pattern on this bowl is perhaps the most complicated one we have recovered from the Galaz ruin. It is also a most consistent pattern. The unit of the pattern is a design repeated four times with startling precision and accuracy. It thus conforms to the most frequent architectural plan of Mimbres geometric patterns—which may be called the four-unit type.

The pattern is so intricate that even artists fail to "see" it until they have traced the line, in some one of its four repeated units, from one of its points of changed direction on around the entire unit to its finish at the point of starting. Usually they are not satisfied until they have thus traced all four of the separate units of the pattern.

Each of the four presentations of the design consists of a line which changes its direction twenty-one times—after which it joins itself at its point of beginning, thus making an enclosed decorative unit. Though each presentation of the design extends half-way around the bowl, yet (as is seen by the drawing) each one extends for half its length under the unit of design presented at its left, while the other half extends above the unit of design presented at its right. The length of the line in each of the four presentations of the design is five feet, three and one-half inches—making a total of about twenty-one feet for the entire pattern.

Typical Mimbres bowls, as this one, after having been shaped were covered by a white coating or slip, after which the artist to produce her design painted with color which

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usually fired black—as it did on the bowl in hand. The technique of Mimbres artists was versatile, even when they employed only black on white. They made “positive designs” in black which stand out sharply against the white background. They also made “negative designs” which are white figures cleverly conceived by the artist and left unpainted at the time the black paint was

than it would be if it were a positive one. It was first conceived by its creator as existing in the virgin whiteness of the slip. Then it was visualized throughout its twenty-one turnings. Finally, it was produced by a technique which did not draw even one of those twenty-one turnings of the white line—a technique which painted black all the remainder of the white-slipped surface of the



Courtesy of V. P. Hollis, Univ. of Minnesota.

HORIZONTAL VIEW OF INTERIOR DESIGN.

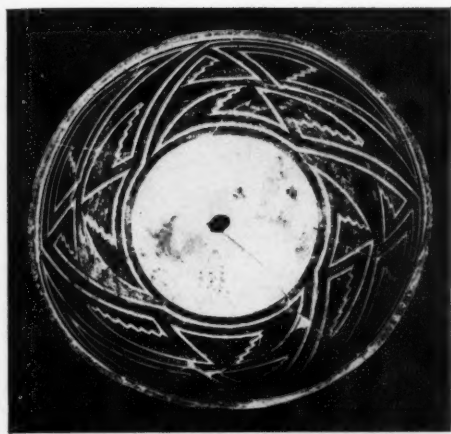
applied to all the remainder of the surface previously covered with the white slip. Now and then also there was produced another design having distinct unit figures one part of which was shown positively in black and the other negatively in white.

The design in the present bowl is a negative one. This means, then, that this complicated design as produced is much cleverer

bowl, leaving the white line of the design an untouched creation.

I have no idea what the pattern meant to its creator, but I believe that the artist who conceived it and produced it with such skill, such symmetry, and such swirling dynamic power, in all likelihood ascribed a meaning to it as she produced it. Its conception, most certainly its execution, must have given its

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Courtesy of V. P. Hollis, Univ. of Minnesota.

VERTICAL VIEW OF INTERIOR DESIGN.

artist creator aesthetic satisfaction of no mean order.

At what place in a distinctive Mimbres design did the artist begin to execute her pattern? One ponders on this problem frequently. In the pattern before us, I believe the query may be answered, because there are two points in each of the four presentations of the unit design at one or the other of which the work must have begun. From one point the design develops clockwise, and

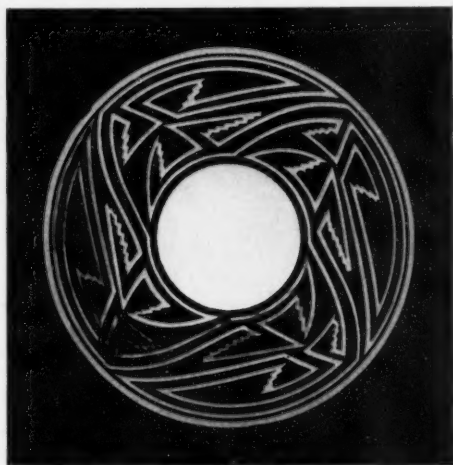
from the other contra-clockwise. Since the design is so distinctly dynamic as it drives on to the right, I believe it was developed in the clockwise direction.

It has been said that the pattern is of the four-unit or quadrant plan. The central white area of the bowl is encircled by a black ring. On that ring I believe the artist began her design. At each of four equally distant points on that inner black circle the design in a bold sweep, like a live thing, swings to the right its legitimate quadrant of the circle. There, of necessity, it leaves the circle, but, with centrifugal power, it sweeps toward the black ring encircling the rim of the bowl. It halts, toward the rim, where it must in the interest of the symmetry of the complete design which was in the mind of its creator.



Courtesy of V. P. Hollis, Univ. of Minnesota.

DRAWING OF ONE-FOURTH OF DESIGN.



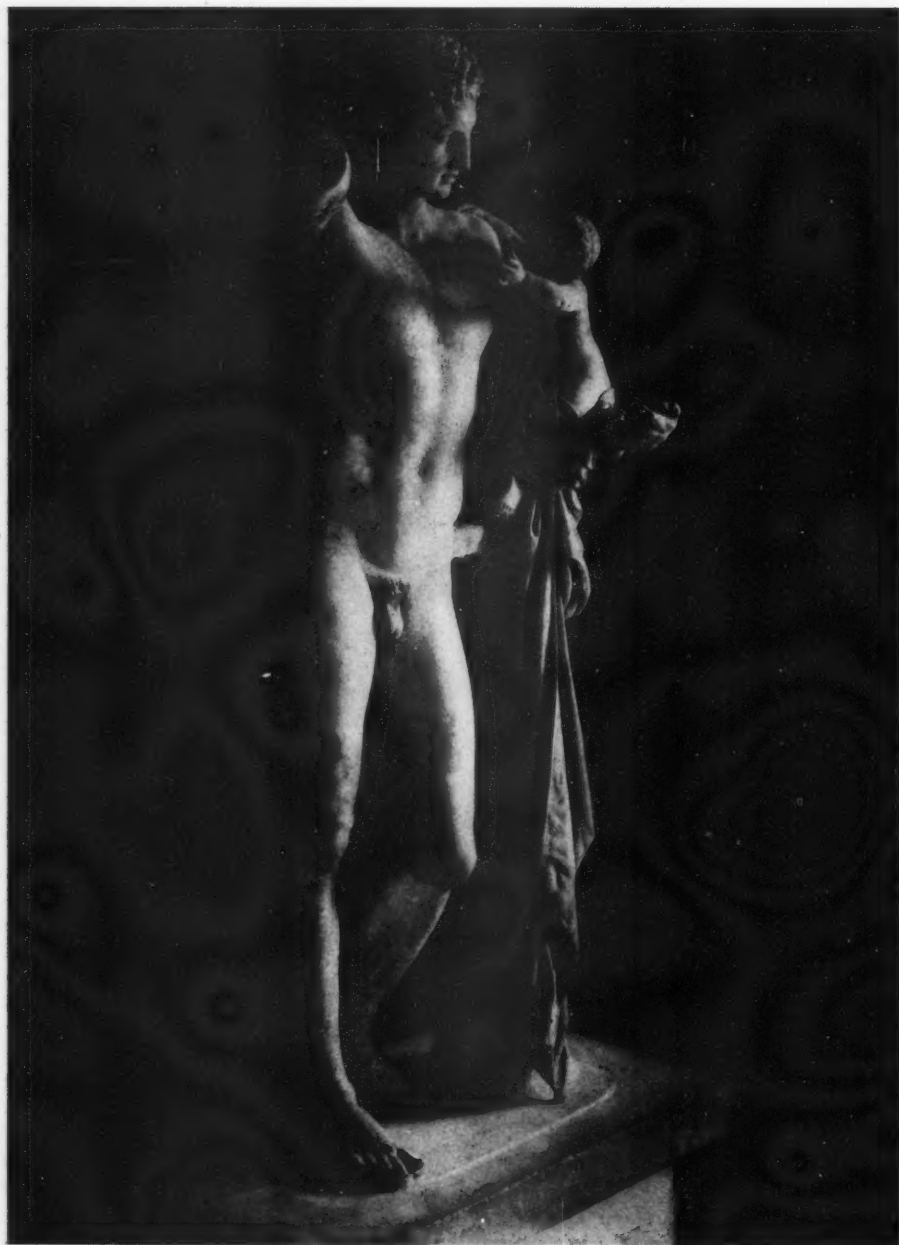
Courtesy of V. P. Hollis, Univ. of Minnesota.

DRAWING OF COMPLETE OR FOUR-FOLD DESIGN.

Then, as if to fill space, it advances, even though falling, staggers backward, rights itself again, and goes forward—only to see that its opportunity for a far drive to the right depends on a necessary strategic retreat. This it makes, then finishes as far to the right as it can go until it manoeuvres into the arc of the larger circle.

There seems almost to be humor in the next three movements of the line: a bold, long retreat, a short staggering advance as if in mockery, then a quick artistic backward movement. A sudden turn follows with a rapid advance to the long-seen place of advantage—from which, as if in triumph, the

(Concluded on Page 158)



HERMES BY PRAXITELES.

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CHILDREN IN ANCIENT ART

By ERNESTINE F. LEON

THE extant examples of the earlier period of Greek sculpture are commonly divided into the following categories: the standing draped female figure, the standing nude male, the seated figure of either sex and the running winged figure. It is noteworthy that none of these includes representations of children. In prehistoric art, however, among the many figurines of the earth mother, *Gé kourotraphos*, from the neolithic period, there is a crude little one from Chaeronea holding a cylindrical object, obviously meant to represent an infant.

The numerous statues of the Italic earth-mother from pre-Roman Capua, now in the Museo Campano of that city, hold infants varying in number from one to twelve, all closely resembling loaves of French bread with a rudimentary head attached. One lady carrying six in each arm looks as if she were just returning from the bake shop.

Examples of the *kourotraphos* type have not, however, survived from the archaic period of Greek sculpture. Perhaps the earliest existing example of a statue representing a pre-adolescent, is the bronze *spinario* of the Conservatori Museum on the Capitoline in Rome. This is generally accepted as an archaic work. It represents a boy of about twelve drawing a thorn from his foot and is believed to have been set up to commemorate the victory in a foot race of a boy who won despite this handicap. The sculptor has succeeded in producing a charming composition but did not try to represent the anatomical details of the child's form with exactness. The limbs seem too long in proportion to the trunk. The torso is overmuscular. The hands are neither those of a chubby child nor of a boy in the gawky age. The marble copies of the *spinario* in various museums belong to a later period and are variants of either this statue or the archaic original of which it is a close copy.

The *kourotraphos* type has survived from the great age of Greek sculpture, in the

Eirene and Ploutos (Peace nourishing Wealth) of Cephisodotus, a contemporary of Phidias. The most complete existing copy of this is now in the Glyptothek at Munich. Cephisodotus' more famous son, Praxiteles, used the type in his well-known *Hermes*, found at Olympia and now in the museum there, a work which has the distinction of being one of the few Greek statues other than



THE "SPINARIO", OR BOY EXTRACTING A THORN FROM HIS FOOT.

architectural sculpture, known to come from the hand of the master himself. Most of the statues famous among the Greeks are known to us only through copies made by craftsmen for the Roman connoisseurs.

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AN ATTIC FUNERARY RELIEF, NOW IN THE NATIONAL ARCHAEOLOGICAL MUSEUM AT ATHENS.

In the statue of the Hermes, Praxiteles attained perfection in representing the adult human form. The imperfection of the little Dionysus as the portrayal of an infant has been excused on the ground that it is a mere detail to show Hermes in the role of the protector of the young and so did not merit careful study on the part of the sculptor.* The face of the child is only roughly blocked out. The proportions of the body are those of a mature person with none of the rounded chubbiness of babyhood. It is related that Praxiteles considered an Eros, which he had made, his masterpiece. This, however, was the statue of a youth; for the baby Eros, the Cupid of the Romans and of modern times,

*No infant figure in Greek sculpture became truly realistic until considerably later. See Gisela Richter's *Sculpture and Sculptors of the Greeks*.—Ed.

appears first in terra cotta figurines a generation or more after Praxiteles.

The minor artists contemporary with the great period of Greek sculpture, as is to be expected, were no more accurate in delineating children than were the great masters. Children appear on several of the many grave reliefs from the Ceramicus, the great cemetery of Athens. These reliefs represent not scenes of mourning but incidents in the daily life of the deceased, often a scene of farewell. One now in the National Archaeological Museum at Athens shows a swaddled infant, of the loaf-of-bread type, whose serious little face peers from under a conical cap. He is in the arms of one of the two figures, who are evidently saying farewell to the deceased. Another stele, erected to an athlete, shows a very diminutive slave, who seems a miniature man, seated at his feet.



THE SLEEPING CHILD, IN THE MUSEO DELLE TERME, ROME.

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On a slightly later stele now in the Metropolitan Museum in New York a child, possibly a younger sister of the deceased, is shown. This figure is that of a mature person. Only the smaller scale to which it has been reduced would indicate that it is meant to show a little girl.

It is not until the Hellenistic age, after the death of Alexander the Great, that sculptors are interested in portraying children with correct anatomical detail. The famous collection of statues, the best extant copies of which are now in Florence, representing the death of the sons and daughters of Niobe by the darts of Apollo and Diana—because the queen had boasted herself superior to their goddess mother, Latona—is generally regarded as dating from early in the Hellen-



NIOBE VAINLY TRYING TO PROTECT HER CHILDREN FROM THE JEALOUS ARROWS OF THE GODS.



THE BOY WITH THE GOOSE, IN THE LOUVRE, PARIS.

istic age. Yet even in this work, the youngest daughter who clings to her mother for protection is a young girl with slender waist and rounded hips rather than a child, though her proportions are small in comparison with those of her heroically molded mother.

Children who are children in contour as well as size appear in the genre piece of Hellenistic sculpture. The work of the last great Greek sculptor Boethius, the *Boy with the Goose*—the goose was a favorite household pet in antiquity—is indeed a study in infant anatomy, no less pleasing now to us than it was in ancient times, as the existence of numerous copies testifies.

We may wonder at the reason for this absence of interest in children in the archaic and great periods of Greek art. It has been asserted in regard to the Hermes, that "the

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Greeks considered the claim of babyhood unfitted to the dignity of art and they were right. It is only in the decay of a nation that children are uppermost; only when a race is getting senile, does it offer morbid worship to immaturity".* Whatever one may think of the propriety of such an attitude on the part of the Greeks, it must be borne in mind that at the highest period of Athenian glory society was practically oriental in tone to the extent that women of position and good

age of six. We may therefore understand why the great creative artists considered children not worthy of careful study, since children did not to any great extent come into the sphere of their daily life.

In the Hellenistic age, however, women emerged from their seclusion, took some part in politics and an active share in social life. Hence at this period literature—the great mass of Alexandrian erotic poetry and the Greek romances—began to be written for a



ALLEGORICAL BAS-RELIEF OF THE FERTILITY OF THE EARTH.
UFFIZI GALLERIES, FLORENCE.

standing had no share in social life and were relegated to the gynaeconitis, or women's quarters, though there were doubtless exceptions. Small children were therefore to a large extent reared with their mothers apart from the men of the family. Even Plato, really quite a believer in equal rights, advocates keeping children with their nurses until they enter the community orphanages at the

public which included woman. Similarly the artists of the day had the same appeal in view. Besides, the political importance of the young heirs to the dynasties which ruled the fragments of Alexander's empire helped to bring the abstract idea of the child before the public and embody it in sculpture.

It was the idea of the child as the agent for the preservation of the family with its traditions and theme of the state that appealed to the thoroughly occidental Romans, among

*Jane E. Harrison, *Introductory Studies in Greek Art*, London, 1892, p. 253.

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whom from earliest times woman had a share in social life and held a position of respect.

Roman sculpture, which is largely the work of Greek artisans employed by Romans to satisfy Roman taste, comes to us with complete mastery of technicalities since with few exceptions all extant examples date from the

On the reliefs now in Florence from the Ara Pacis Augusti, among the earliest preserved and one of the finest examples of Roman art, we see not only the imperial children in procession but have also the allegorical relief of fruitful mother Italy nourishing her sons who are to become the future support of the state. Lusty infants they are, to be sure.

Since it was not beneath the dignity of Rome to represent the forms of children on her greatest national monument, we are not astonished to find them in works of art intended for the decoration of homes. The *putti* in the wall-paintings of the House of the Vettii and that other mansion which takes its name from the golden cupids, at Pompeii, are direct descendants of the cupids of the minor arts of Greece which sprang up after her sculpture had reached its zenith. Representations of children in sculpture intended for purely ornamental purposes may probably be referred to Alexandrian genre sculpture. The little slave who has fallen asleep while waiting with a lamp for his master—now in the Terme Museum at Rome—seems thoroughly Roman, however, for he wears the *paenula*, the Roman workman's combination raincoat and hat still in vogue in the mountain districts of Sicily. Another charming portrayal of the child's form occurs on a relief showing a nymph offering a drink to a little satyr boy, now in the Lateran Museum at Rome. This is thought to have come from the Palace of Domitian on the Palatine.

Nearly all the larger museums show examples of winsome baby heads, broken from reliefs or statues. The child is glorified under the Roman empire both for his potentialities and as a thing of beauty. In early Christian art, however, children again appear as miniature adults or swaddled formless bundles. Interest in the charm of the childish form reappears, as all know, in the art of the Renaissance. This may be due to the rediscovery of works of Roman art as well as to the new spirit of the age.

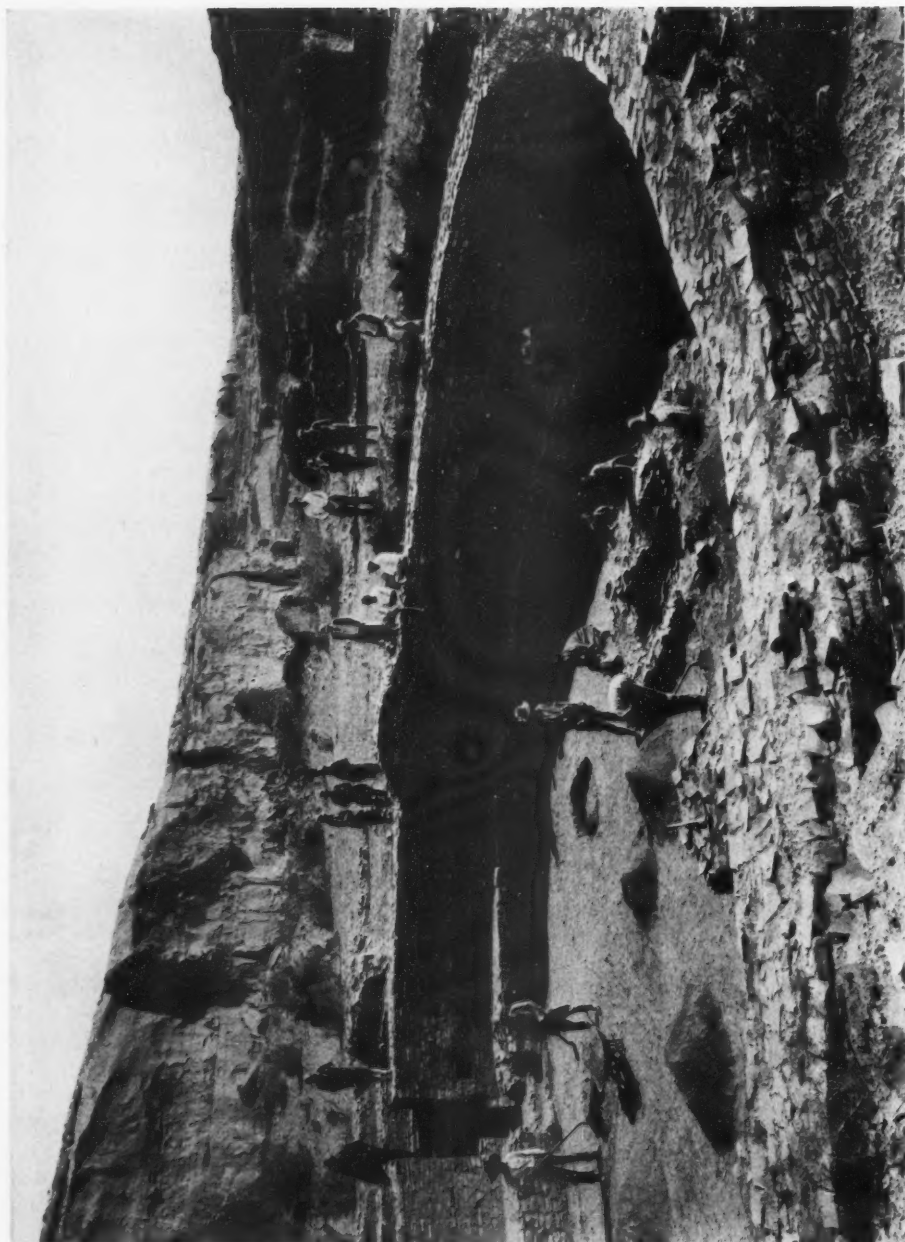


Photograph by Arthur Stanley Riggs.

THE STELA OF ARCHESTRATÊ, FOUND AT MARKOPOULO, IN ATTICA. THE DEAD WOMAN AT THE RIGHT, HAS HER HAND IN A JEWEL-BOX HELD BY THE SERVANT, WHILE AGAINST HER KNEES LEANS HER LITTLE GIRL HOLDING UP A PET BIRD AND LOOKING AT HER TENDERLY. ON THE ARCHITRAVE IS AN INSCRIPTION: "HERE BENEATH THE EARTH LIES ARCHESTRATÊ, BEAUTIFUL AND WISE, DEARLY BELOVED OF HER HUSBAND." THE CHILD IS VERY BADLY DONE. THE STELA DATES FROM THE BEGINNING OF THE IVTH CENTURY.

imperial period. In all works which show children, anatomical details are correctly represented.*

*The Romulus and Remus of the Capitoline Wolf are not ancient but a renaissance addition to the ancient wolf.



Courtesy of the Atchison, Topeka and Santa Fe Railway.

SUN TEMPLE IN CHETRO KETL RUINS. DR. HEWETT IS THE FIGURE AT THE EXTREME LEFT AT TOP OF STEPS.

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THE CHACO CAÑON IN 1932*

By EDGAR L. HEWETT

*Director of the School of American Research, Archaeological Institute of America, and
Professor of Archaeology, University of New Mexico*

ACCOUNTS of our earlier period of excavation in Chaco Cañon will be found in ART AND ARCHAEOLOGY, January-February, 1921, and September, 1922. These should be reread before taking up the story of the excavations now in progress. In the study of the site resumed in 1929, the University of New Mexico is associated. Advanced students from many universities and colleges who have had previous field experience have been present as observers and apprentices.

As the story of ancient life in Chaco Cañon unfolds, readers will want to go back to review the earlier chapters. These may be briefly recalled. The first important scientific work done there was that of the Hyde Exploring Expedition, 1896-99 inclusive. The Director was Dr. Frederick Ward Putnam of Harvard University. While Dr. Putnam prepared the plans for the work, he was not continuously present; his field assistant was Mr. George Pepper of the American Museum of Natural History of New York. The project embraced the excavation of Pueblo Bonito and a physiographic study of the Cañon. Pepper's record, published by the American Museum, is still available. He reported on the excavation of 198 rooms and the cultural material recovered therefrom. As this was before the days of the repair and preservation of ruins in the Southwest, the excavated rooms were for the most part refilled and eventually had to be re-excavated. The physiographic studies of the Expedition were made by Professor R. E. Dodge of Columbia University.

* A paper read at the annual meeting of the Southwestern Division of the American Association for the Advancement of Science at Denver, April 25.

Mr. B. T. B. Hyde, for some years past devoted mainly to Boy Scout work, was one of the principal financial supporters of the enterprise.

The next major study of Chaco Cañon was that mentioned at the opening of this article, 1919-21 inclusive. It was suspended to make way for the excavations described below.

The National Geographic Society commenced work on Pueblo Bonito in 1922 and continued five years. The expedition was under the direction of Mr. Neil M. Judd, whose reports in the *National Geographic Magazine* will be remembered. The great community house was excavated, put in repair and turned over to the National Parks Service as a feature of the Chaco Cañon National Monument.

It will be recalled by readers of ART AND ARCHAEOLOGY that the most spectacular feature of the excavation by the School of Research in 1919-21, was the Great Sanctuary in the court of Chetro Ketl. Photographs of it as left in 1921 are here reproduced. As this great circular temple, 64 feet in diameter, was disclosed at that time, it was pronounced by Dr. J. Walter Fewkes, Chief of the Bureau of American Ethnology, "the most noteworthy structure uncovered north of Aztec Mexico". It was by him considered a "Sun Temple". We are not yet prepared to accept his identification, but his opinion seems likely to be confirmed. It is not unique. A similar one was excavated by Mr. Judd in Pueblo Bonito, and one of like character excavated and restored by Mr. Earl Morris at Aztec in the San Juan Valley. There is also one across the arroyo from Chetro Ketl, half a mile to the south, known

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as Casa Rinconada, which will be referred to later.

In view of the further examination of the one at Chetro Ketl, attention is called to certain features to be seen in the illustrations. First, the small rectangular openings in the upper inner wall, twenty-nine in number, all on the same horizontal level, and approximately $6\frac{1}{2}$ feet apart. These are not windows piercing the wall, but simply blind niches. Note also the heavy bench extending around the inner circumference of the chamber. Note the antechamber on the north side, from which the Bowl could be entered by means of a stairway; also the two rectangular pits in the floor south of the east-and-west axis. These in the first excavation were found filled with ash and incinerated bone material to a depth of about two feet. The floor, then supposed to be the bottom, was of crushed rock. These are spoken of as the fire-vaults. Notice also the four circular pits in the floor, approximately twenty-five feet apart, nearly four feet in diameter. In these stood the massive posts which presumably carried the heavy lintels upon which rested the roof-beams. The circular pits were floored with rubble and when emptied of debris were from three to five feet deep. The Sanctuary as thus uncovered and repaired appeared, except for the absence of the roof, as occupied and used as a place of assemblage for religious ceremonies. Its capacity has been variously estimated at from 500 to 800 people, standing. It conformed in most respects to the somewhat smaller one excavated at Pueblo Bonito, and to some extent to the one at Aztec.

On resuming work at Chetro Ketl in 1929 the idea of deeper excavation throughout the entire site was determined upon. This, during the three seasons just past, was carried out under the Great Bowl, the floors of the main community house, and outside of its north wall. Since the inauguration of this deeper work, the reputation of Chetro Ketl for surprises has been continuously maintained.

A small amount of excavation on the south side of the Great Bowl disclosed the fact that massive terraces were buried beneath the floor. It was soon discovered that the great bench was covered with a veneer of inferior masonry which, when removed, disclosed solid terraces of master-work far superior in character to anything exposed in the previous excavations. It was decided to excavate the south half of the Bowl, leaving the north half as previously uncovered. At the same time it was necessary to preserve the two fire-vaults, the altar, and the two circular pits in which the columns supporting the roof had stood. Therefore, the excavation was extended downward through one floor after another to what was finally conceded to be the original valley level, working



MAIN EXCAVATION, CHETRO KETL, 1931.

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FOUND IN CRYPT NO. 3. CHETRO KETL BOWL.

around the above-mentioned structures, without destroying any important feature. All of these are satisfactorily shown in the illustrations.

A succession of terraces was uncovered, four in number, disclosing the fact that the original structure had been in amphitheatre form. It seemed to have been deliberately filled, either by the inhabitants on the first abandonment of the site or when reoccupied by a later generation who built upon it the structure we uncovered several years before. Particularly noticeable was the perfect condition of the walls of the earlier temple. No break of importance was found in the splendid masonry of any of the terraces. Toward the end of the season of 1931 Mr. Postlethwaite and his assistants who had been conducting the excavation, uncovered a pocket toward the bottom of the lowest wall in which had been deposited a string of 1,045

jet and white shell beads. The string measured six feet in length. In a nearby pocket was a deposit of small bits of turquoise, approximately 1,000 pieces, prepared as though for use in some mosaic piece.

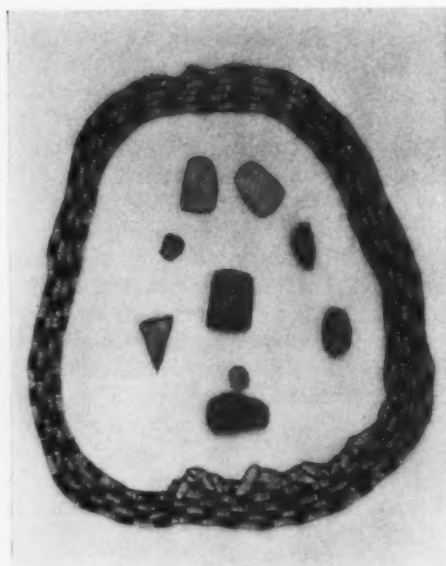
It was found that in the vertical wall of the middle terrace a number of blind niches similar to those in the upper level had been completely sealed. In rounding out some work in the latter part of March of the present year, Mr. Reiter opened five of these niches and discovered that each one was a receptacle for an offering of beads and other ornaments of turquoise and shell. The principal feature in each deposit was a bead necklace of shell and a black mineral as yet undetermined, together with numerous pendants and buttons of turquoise. The strand of beads in each niche numbered as follows:

- No. 1 1130 beads
- No. 2 1916 beads
- No. 3 1761 beads, the strand being
13½ feet long
- No. 4 1923 beads
- No. 5 2113 beads, the strand being
13 feet long

The important thing about this find is its indication that the sealed crypts in the ancient period at Chetro Kettle were carefully covered and never molested by subsequent occupants, while pointing to the fact that in the upper and later structure all niches had been opened and rifled. When it is understood that among the ancient people of America turquoise and shell, because of their symbolic value, were treasured even beyond gold, the importance of this find will be realized.

The excavation of the main community house was conducted by Paul Reiter of the New Mexico Museum staff. As the successive stories of the great building come into view, it becomes clear that the town with which we have long been acquainted was built upon the walls of an older period. The

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DEPOSIT IN CRYPT NO. 5. CHETRO KETL BOWL.

deeper structure, as in the Great Bowl, is of superior masonry and shows little signs of long deterioration. All exterior openings in both levels are walled up, as are many of the inner doors and windows. A trench against the north side of the main wall shows that it is buried under some seventeen feet of drifted sand. Portions of five stories of the building are now visible. When the outside drift is cleared away, the main walls of Chetro Ketl will stand not less than thirty-five feet high above the original valley level.

It is now seen that our original excavations in the main community house stopped at the bottom of the later town which forms the top of the older one. The excavation now becomes a tunneling proposition. Mr. Fisher has commenced the pouring of concrete piers under intersecting walls of

the upper structure. On the top of these, railway irons carry the weight of superimposed walls. A large kiva is found to extend partially underneath the east tower. The tunneling will be continued until the main features of the older town are fully disclosed.

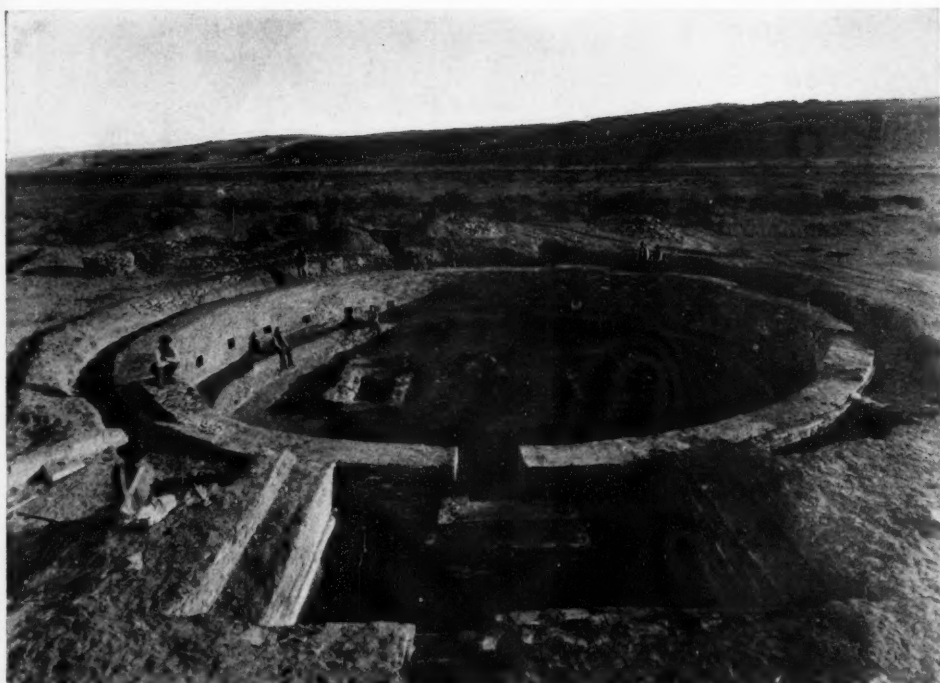
Mr. Reiter's treatment of shattered walls, providing for their preservation while retaining their ruined appearance, is the most effective that has been worked out in American archaeology. The process devised by him with the assistance of Mr. Sam Hudelson, superintendent of buildings and grounds at the State Museum, does away with the unsightly capping and guttering of ruined walls which has been so extensively used in the Southwest.

Returning now to the Great Sanctuary, deeper excavation of the circular pits disclosed a massive disk of sandstone forming the floor of each one. Lifting this disk by means of jack-screw and tackle, another of like size and character was found beneath it. Raising this one in like manner, a third was found, and still a fourth, altogether forming a base for the columns that would support almost any conceivable weight that might be placed upon them. These disks weigh in the neighborhood of 1,500 pounds



LOOKING INTO A FIRE-VAULT AT CHETRO KETL.

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THE GREAT SANCTUARY AT CHETRO KETL, A CEREMONIAL MEETING PLACE OF THE ANCIENT INDIANS OF CHACO CAÑON, AS FIRST EXCAVATED.

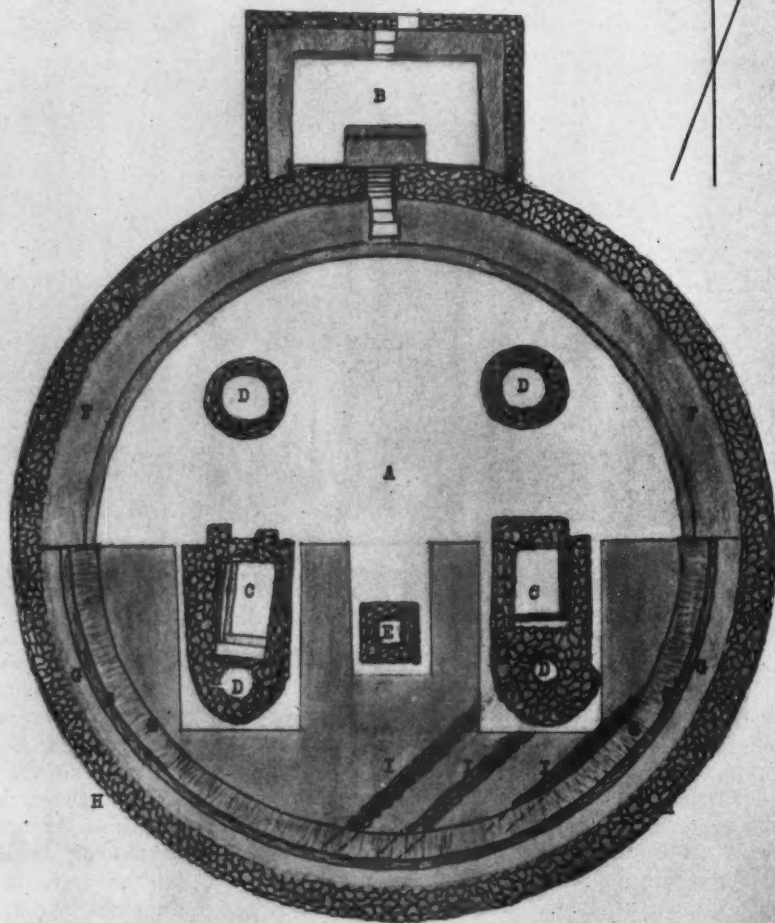
each and the handling of them without machinery was a feat of no small magnitude in primitive engineering.

The fire-vaults were also found to have been incompletely excavated. Going through the rubble floor, these have been cleared to their final depth, as seen in the illustrations. Toward the bottom of the west and south wall of each a series of narrow terraces is carried down to the flagstone floor.

It had been the intention to leave the entire north half of the floor of the Great Bowl intact, but this idea will have to be abandoned. Across the arroyo to the south, about half a mile from Chetro Ketl, is another of these circular temples known as Casa Rinconada. It is detached from any community house, and in the hope that it might throw some sidelights upon the Chetro Ketl Bowl its excavation was ordered in 1931. The work

was supervised by Mr. Gordon Vivian with a number of student assistants, Mr. Richard Vann taking care of the repair work. The results of the excavation, with the correspondences and variations between the two sanctuaries, are shown in the accompanying illustrations. The outstanding features of the Bowl of Chetro Ketl are repeated at Casa Rinconada. The two periods of occupation are obvious, the older walls being covered with a veneer of inferior masonry. However, certain new features are found at Rinconada, especially on the north side, which clearly indicate the necessity of looking for similar features at Chetro Ketl. Just north of the west vault and flush with the floor level was discovered a double-walled circle sixteen feet in diameter. The walls of rough masonry are from six to ten inches apart, with a trench between, fifteen inches deep,

GROUND PLAN
of the
GREAT SANCTUARY AT CHETRO KETL
AS NOW EXPOSED

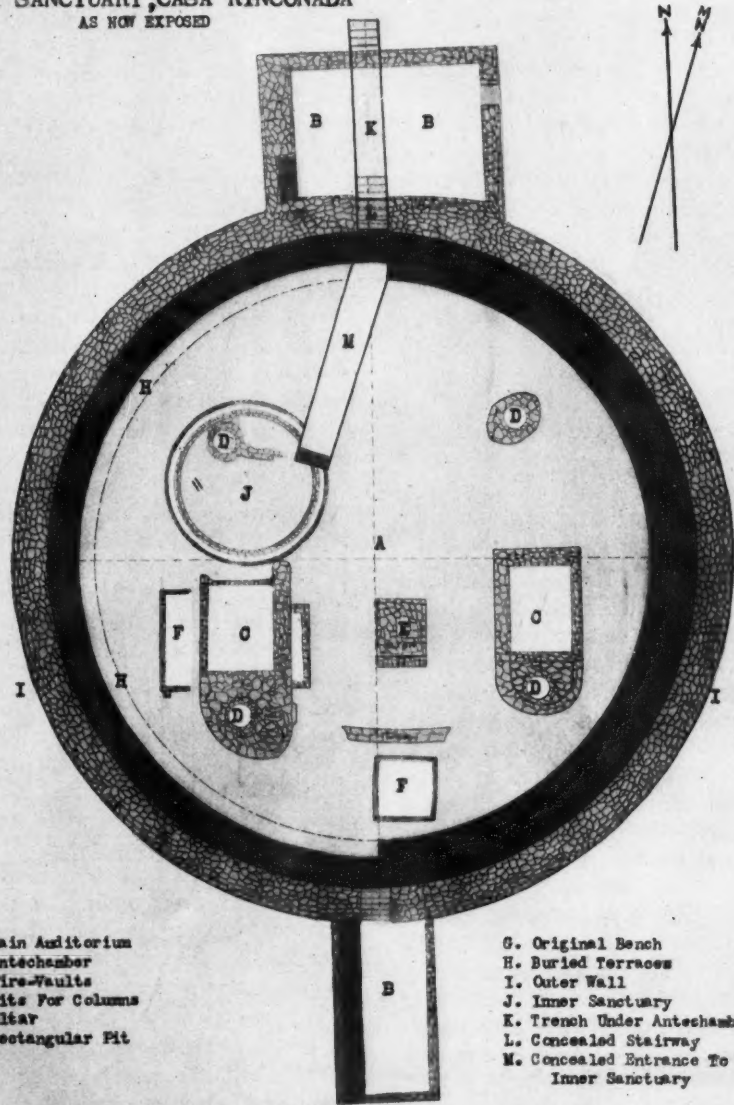


- A. Main Auditorium
- B. Antechamber
- C. Fire-Vaults
- D. Pits For Columns

- E. Altar
- F. Original Bench
- G. Buried Terraces
- H. Outer Wall

I. Crude Walls Under Deepest Floor

GROUND PLAN OF THE
GREAT SANCTUARY, CASA RINCONADA
AS NOW EXPOSED



- A. Main Auditorium
- B. Antechamber
- C. Fire-Vaults
- D. Pits For Columns
- E. Altar
- F. Rectangular Pit

- G. Original Bench
- H. Buried Terrace
- I. Outer Wall
- J. Inner Sanctuary
- K. Trench Under Antechamber
- L. Concealed Stairway
- M. Concealed Entrance To Inner Sanctuary

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the bottom formed by the undisturbed hardpan. Here is a feature entirely new to Southwestern archaeology; a sanctum within a sanctuary.

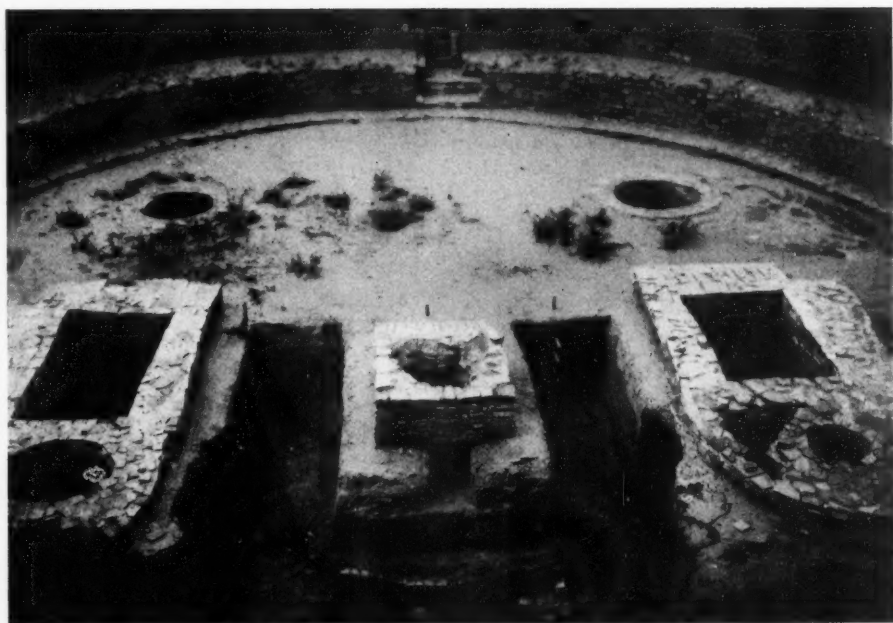
The excavation of the north antechamber disclosed a passageway beneath the floor which passes under the chamber and then, by way of a long, slightly curved stairway, proceeds below the main stairway to the auditorium; then, veering to the west, extends to another stairway which rises to the floor level at the rim of the double-walled circle above described. There was thus provided a secret passageway from outside the Sanctuary underneath the floor of the antechamber and below the stairway of general use, giving access to the inner sanctuary. Only one explanation of this seems convincing; namely, that here was a secret entrance and exit for the priests not unlike the contrivances of the oracles in Greek temples.

SUMMARY

In the existence of Chetro Ketl we have an epitome of life in all the towns of Chaco Cañon. Its unwritten history is divided into two periods, the length of each and of the hiatus between being unknown. As an inhabited community, it existed for some centuries. In each period it went through no gradual process of decay such as we notice in surviving Indian towns. Its first period closed abruptly at the height of its cultural attainment, and during its period of abandonment it suffered little destruction from the elements. The new town was erected upon the walls of the original, but in the second period reached no such excellence of construction as in the first. From the older town no tree-ring material has been recovered. The second period yields a tree-ring record of the greatest importance. Miss Florence Hawley has collected several hundred specimens from Chaco Cañon mainly from the ruins of Chetro Ketl. It has not been possible to study and prepare for publication this large number, but her report on a single timber will be found of great interest.

In a letter to the Director, Miss Hawley says:

"You will be interested to hear that one of the great pilaster logs from the east tower kiva of Chetro Ketl has yielded some extremely important data. If you remember, I took three logs from the kiva, two of which I dated in the Chaco and sent to Dr. Douglass. These were of no benefit in checking the earliest range of Dr. Douglass' main chart, which had not been carried further back than 730 A. D. with assurance. The third specimen was not so large as the others and more decayed. While I hoped for possibilities of very early records on the interior, I really did not expect it. Imagine the excitement when just before Christmas I took out the specimen, whittled off the surface, and dated it back to 643 A. D. in the center. Moreover, the record is so clear and perfect that we have added it to the main chart, carrying that back 90 years further than ever before." Miss Hawley adds that Professor Douglass has checked the dating and found it to be correct and states that carrying the tree-ring chart back a period of 90 years earlier than the oldest previously assured date has contributed a record of the greatest importance. It is of interest to note that the forests from which the ancient inhabitants of Chaco Cañon derived the timbers for their great community houses were starting to grow when the ancient Maya of Central America were still flourishing, and that we are now uncovering buildings in the Chaco Cañon contemporaneous with those of the Toltecs of the Mexican plateau and the pre-Inca civilization of Peru. Confirmatory of this is a second report from Miss Hawley of a few days ago that from a beam taken from Una Vida, a ruin a short distance above Chetro Ketl, there is obtained the earliest building date so far known in the Southwest; that is, 861 A. D. The earliest building date heretofore obtained is the one from Pueblo Bonito, 919 A. D. For comparison with the Chaco Cañon dates, the following table



THE EXCAVATIONS AROUND THE FIRE-VAULTS AND ALTAR.

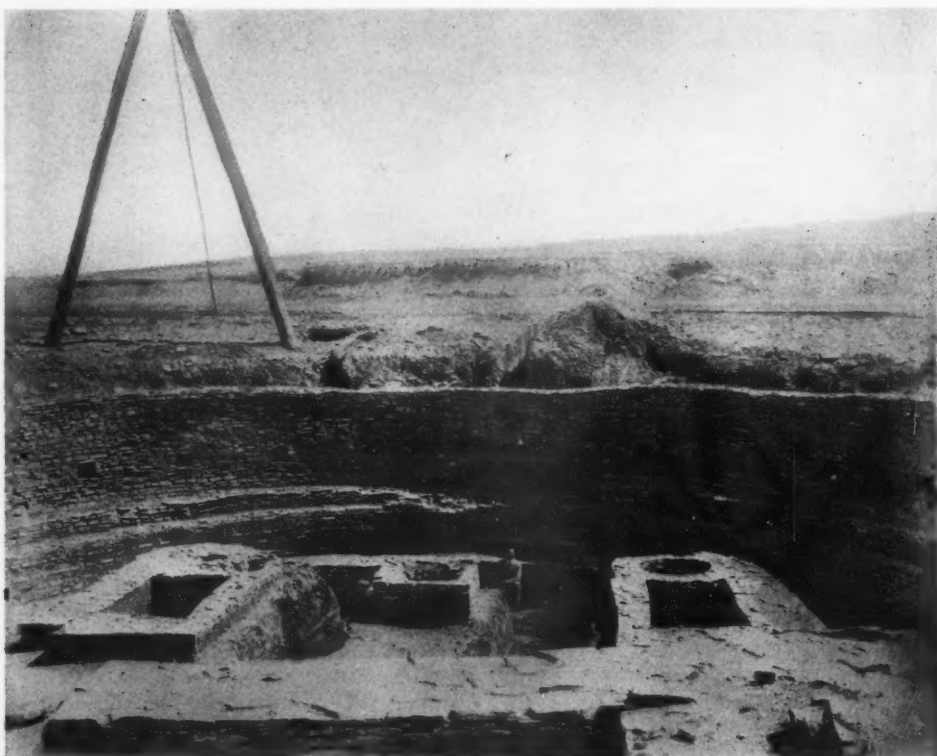
will be found convenient by way of assembling a picture of what was going on in other parts of the world while these ancient Americans were running their silent course in the deserts of the Southwest:

- 622 A. D. The Hegira; beginning of Mohammedan calendar.
- 643 A. D. *Beginning date of Chetro Ketl log.*
- 732 A. D. Battle of Tours saved Europe to Christianity.
- 742 A. D. Birth of Charlemagne.
- 762 A. D. Founding of Bagdad.
- 849 A. D. Birth of Alfred the Great.
- 860 A. D. Iceland discovered by the Northmen.
- 861 A. D. *Una Vida date, Chaco Cañon.*
- 871 A. D. Alfred the Great became King of England.
- 919 A. D. *Pueblo Bonito date, Chaco Cañon.*

It must be remembered that the timbers from which the Chaco records come may have been re-used from older structures.

The second period at Chetro Ketl ended abruptly without signs of gradual decay. The town was prepared for abandonment. All exterior openings and many interior were walled up. The building was securely sealed, as we close residences and warehouses today for protection against weather and intruders when out of use. The exodus took place, we must infer, with full expectation of return. Then came a millennium of silence, and the task of the archaeologist began.

The excavation of Chetro Ketl will free it from the debris of ages, will restore to view what has endured of architecture and other evidences of its material culture. Every precaution will be taken to preserve all these for the future. It will be a show-place of great interest to the public. Will the purpose of the study have been achieved? Will it then be turned over as a finished job? On the contrary, all this is simply preparation for the real study. "The desert shall bloom as the rose," is a favorite slogan of those who look forward to greater days in the Ameri-



THE DEEPER EXCAVATIONS, LOOKING SOUTH, SHOWING NICHES IN LOWER LEVEL FROM WHICH CEREMONIAL DEPOSITS WERE OBTAINED.

can Southwest. Is this a prophetic statement of an attainable purpose, or simply the poetic expression of a futile hope? Science must find the answer. It may have a vital relation to the future of our present civilization in the Southwest. Archaeology, then, must enter the field of economics.

A number of problems are obvious. If they can be consolidated into one, it is: What caused the exodus from Chetro Ketl, from Chaco Cañon? To start the investigation, one naturally inquires into the agencies that have put an end to peoples. At the head of the list may be placed the most potent enemy of civilization, war.

The traces of war, even primitive war, are ineradicable. It needs no literary record to tell what happened to Tyre, Carthage, the

outposts of Verdun. The remains of men killed in battle, as in Peru, tell the ghastly story. War means destruction. Chetro Ketl was not destroyed. War may be eliminated in this inquiry.

Epidemics have exterminated peoples suddenly and through slow degeneration. But the most potent scourges of men leave their record in the bones. Quick-moving scourges that destroy utterly, as on St. Lawrence Island, leave the dead unburied. Epidemics often require collective burial or wholesale burning. Not a sign of this has ever been discovered in Chaco Cañon.

Eliminating, then, these major causes of destruction and omitting numerous minor possibilities, the field of inquiry is substantially limited. One naturally asks, what were

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the essential conditions for continued existence in Chaco Cañon? Indispensable are food and water. Food supply becomes precarious from time to time, even under highly civilized conditions, but in one way or another the conditions are usually met. Chaco Cañon could have survived a failing food supply for some years. In the absence of the customary production of corn, beans, squashes, there were the mountains fifty miles away to afford a meat supply that could be carried and stored; and, always the possibility of seasonal migrations, as practised by California Indians from seashore to back country, by the Tarahumara of Chihuahua from high mountain parks to warm *barrancas*. A total local food shortage could be bridged over for a considerable time. But what about water? To President Shantz of the University of Arizona, in an interview published in *Collier's*, April 23, 1932, the following statements are attributed:

"If the water supply of the world were to end next Monday, by the following Saturday

afternoon there wouldn't be a living soul on the face of the earth. There is no substitute for water." Again: "a drought, to water scientists, is a period of fourteen consecutive rainless days; a partial drought is a period of 28 consecutive days, on each of which less than one inch falls. In some of the hardest-hit sections of our country in 1930 no rain fell for many weeks. We live always on a thin edge of security."

If this may be said of our present-day civilization, with its vast facilities for transportation, what would be the condition of a primitive people situated as were those in Chaco Cañon? There the water supply, with the exception of a small amount of rainfall that could be stored, was limited to the little stream that flowed through the valley. This originated on the Continental Divide some miles above. A sudden and complete stoppage of this stream would have jeopardized life in the Chaco Cañon towns within a few days, and in a week or two would have made them uninhabitable. An abrupt and com-



THE BURIED TERRACES IN CHETRO KETL BOWL.

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plete exodus would have been inevitable, and return would have depended upon the resumption of the water flow. It is not necessary to postulate a long-continued drought, caused by adverse climatic conditions, to account for the depopulation of the Cañon.

But science will not rest upon the speculations of archaeologists. A problem so far-reaching calls for intensive study of phenomena of many kinds, upon patient accumulation of facts, upon convincing demonstration from data observed, accurately recorded, and clearly coordinated. Mr. Reginald Fisher, of the expedition staff, as a development from the State Archaeological Survey, has undertaken a definitive study of the water situation. He proposes to measure from month to month and from year to year the present small surface and subsurface supply at the main focus of population; to estimate the needs of the twelve communities in and tributary to Chaco Cañon during the period of habitation; to survey and establish points of observation in every mile of the Cañon to its origin on the Continental Divide. Specialists in geological changes will study the upper Cañon with a view to finding

anything that might have affected the water-course, either abruptly or gradually. The biological staff will work on the plant and animal life, ancient and present; noting changes and adaptations whereby certain forms have been able to survive—all focusing upon the one vital question of why the human animal failed to adapt himself to changing conditions and hence disappeared from the region.

It is obvious that these studies will require many years of observation and recording, and that a permanent station in the field is essential. This is being established and will include a field-museum with necessary laboratory facilities. It may never be possible to determine the cause of man's exodus from the place after some centuries of life under conditions that induced the highest degree of native civilization on the American continent north of Aztec Mexico. But the study can not fail to bear fruit, for every advance in our knowledge of water, plant, animal, and human life is of the utmost value. Present and future existence in the Southwestern part of the United States are dependent upon these factors.

GEOMETRIC DESIGNS ON MIMBRES BOWLS

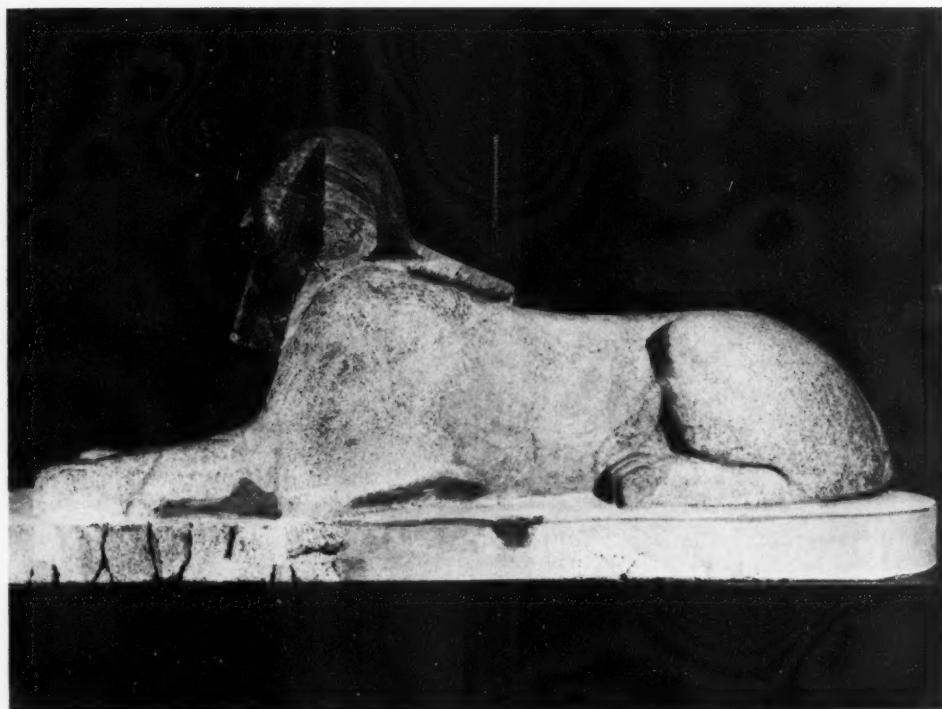
(Concluded from Page 139)

line drives powerfully to the right and reachest its farthest distance against the outer black border or frame of the bowl. That was its outermost goal. To reach it, the advancing line has changed its direction twelve times. But the design is not yet complete.

At that point on the encircling black border of the bowl, the artist might, perhaps, have begun her design, because from there the longest line of the entire design sweeps to the left just inside the black-ringed border. That line also proclaims the pattern to be of the four-unit plan. From that point just noted on the border, the line in all its nine homeward turnings is, it seems to me, sheer art—an exhibition of the artist's sense of symmetry and dynamic rhythm, as with consum-

mate skill she wings her line back to its starting point.

Earlier I said I did not know the meaning of this design, but now, just as I finish its description, a word slips in, a descriptive word—perhaps it reveals the creative whim of the ancient Mimbres artist. Perhaps she had in mind the portrayal of a "winged" line. Four times along the advancing pathway of the line, as we have followed it from its beginnings on the inner circle, to the outer circle and back again, there is a spread wing. Though the line of the design does not begin by flying, it develops wings in its forward movements. Finally, it seems not only to fly back home on sweeping wings but the line as it finishes is actually a flying wing. So I call the design "the winged line in Mimbres ceramic art".



THE GRANITE SPHINX WITH THE HEAD OF QUEEN HATSHEPSUT.

NOTES AND COMMENTS

EGYPTIAN FINDS OF AMERICAN AND GERMAN EXCAVATORS ARE FITTED TOGETHER

Two thirty-four-centuries-old statues of Queen Hatshepsut of Egypt are owned by the Metropolitan Museum of Art in New York and the Egyptian Museum in Berlin as the result of remarkably fortunate circumstances in connection with American and German excavations in the ruins of the famous Deir el Bahri temple on the western side of Thebes, opposite Luxor, in Egypt. Dr. H. E. Winlock, director of the American excavations now carried on for several years near the temple, has the distinction of having made the discoveries which have led to exchanges between the two museums, the results of which are as satisfying to both institutions as they are interesting and important from the viewpoint of art history.

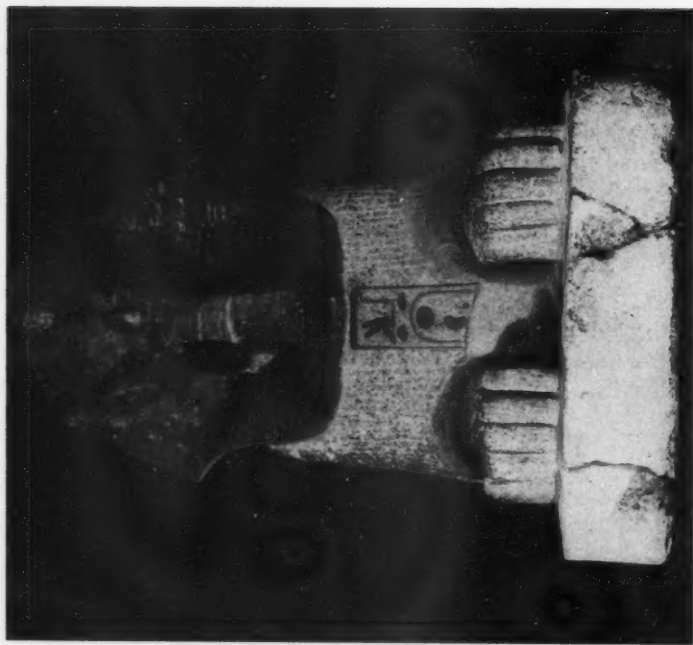
For about 80 years, since the Prussian expedition to Egypt under Richard Lepsius, principal founder of historic Egyptology, the famous Egyptian collection in Berlin has owned several fragments of sculptures from the Deir el Bahri temple, representing the builder of the temple, Queen Hatshepsut. The XVIIIth Egyptian dynasty, to which the queen belonged, sat the throne in 1470 B. C. The most important of these fragments were a portrait head of the queen from a

granite sphinx and a sitting limestone figure, the head of which Lepsius had reconstructed in gypsum.

The Winlock expedition, excavating in the same spot, also found numerous fragments of statues, badly scattered and smashed which, joined together, likewise formed several sphinx images of the same queen. When for one of the granite sphinxes absolutely no head fragments could be found, it occurred to Mr. Winlock that perhaps one of the Berlin sphinx heads might fit with the body he had found. Carefully scaled photographs were exchanged and tried, with the result that the Berlin head was really found to fit exactly to the body that was then still in Egypt. And more than that, it was discovered that a magnificent limestone head, excavated by the Americans, belonged to the figure in the Berlin museum, to which Lepsius had given a reconstructed gypsum head.

Negotiations between Mr. Winlock and Director Heinrich Schafer of the Egyptian Museum in Berlin led to an exchange of finds, which brought the sphinx body to Berlin, where its head was, and the limestone head to New York, where its body was waiting for it. As a consequence, each museum now owns a complete art work of first importance.

Another exchange followed. Berlin consented to part with a granite head of the same queen, for which the Americans had found large parts of the body,



FRONT VIEW OF THE SPHINX, WITH THE HEAD OF QUEEN HATHEPSUT
OBTAINED THROUGH EXCHANGES BETWEEN THE BERLIN MUSEUM AND
THE METROPOLITAN MUSEUM OF ART IN NEW YORK.



THE LIMESTONE FIGURE TO WHICH LEPSIUS HAD GIVEN A RECON-
STRUCTED GYPSUM HEAD, BUT WHICH NOW HAS ITS OWN MAGNIFICENT
HEAD, EXCAVATED BY THE AMERICANS.

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and received in return a charming granite statue of Hatshepsut, showing the queen, kneeling, making a libation from a water vessel.

H. P.

PREVIOUSLY UNKNOWN PUEBLO INDIAN TERRITORY

For four years, as head of the division of History and Social Science at Adams State Teachers College, Alamosa, Colorado, my hobby was to hunt Indian relics around the edge of the San Luis Valley. This valley was once a great mountain lake fifty or sixty miles wide and considerably more than an hundred miles long. I shall not attempt to estimate how many thousands of years ago the Rio Grande River started the process of draining it, or when it finished the job of converting the immense inland lake into a valley.

To the casual observer the San Luis Valley is just a broad, level agricultural area surrounded by mountains with a row of picturesque sand dunes lined up for twelve or fifteen miles in front of its lowest passes looking east across the Sangre de Cristo range—dunes that centuries of prevailing winds from the southwest have whipped into existence from the dry lake's sandy floor.

Where the sand dunes now are three rivers once emptied into the old lake and, according to the best evidence that I can gather, an agricultural civilization once occupied the river deltas under what is now the great sand heaps. With the advent of irrigation in the valley, vegetation has increased to such an extent that very little sand is added to the accumulation known as the dunes, but the prevailing winds in the same direction continually drive the drifts farther up the side of the mountains, exposing today what was covered yesterday.

One wandering along the base of the dunes finds hundreds, if not thousands of metate stones used to grind the corn which apparently formed the major portion of the diet of a non-nomadic civilization. Many flint scrapers, knives, ornaments and arrow-heads are likewise exposed by the receding sands. Associated with the concentrated areas of greatest amounts of debris are dumps of broken pottery along with other matter, the nature of which is impossible to determine.

Potsherds recently sent to the Smithsonian Institution for classification were assigned by Mr. J. E. Graf to the "Pueblo I period". In connection with his report he says: "We venture the suggestion that these sherds represent not a single large Pueblo village but a number of small dwellings of from two to half a dozen rooms". Mr. Graf also says: "It is not unreasonable to expect such remains in the San Luis Valley for ruins of a similar period have been found much farther north both in Colorado and in Utah".

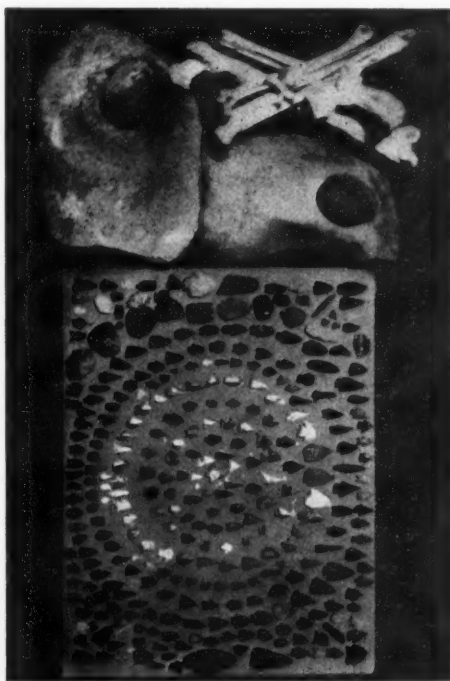
A forest ranger a few years ago reported "dobe" floors of houses exposed in the dunes by the shifting sands but a later attempt to locate them resulted in disappointment. A shift in the direction of the wind might readily cover any area with a foot or more of sand in a few hours. I know from personal experience that large areas exposed to stable soils one day may be covered deep with fine sand and not recognizable a day or two later. A careful following of the exposed areas day after day can hardly result in anything but convincing proof that a permanently settled civilization once inhabited the lake shore—whether we choose

to call them Pueblo or pre-Pueblo peoples. They were at least agriculturalists and pottery-makers, and they have been completely forgotten, even in tradition.

About thirty-five miles south of the dunes is what is reputed by old-timers to be a buried "dobe" village. One of the first settlers in the vicinity claims to have recognized definite adobe walls in the sides of some of the numerous small mounds that cover the area, and the leveling of a few of them for irrigation purposes has revealed charred wood and burned rocks, and recently, not far below the place, came the report of very definite remains of a Pueblo village with pottery scattered about, in an inaccessible part of the canyon.

I have personally examined much of the territory from near the northeastern side of the old lake shore to the southern Colorado line and am convinced that an agricultural, pre-Columbian people once inhabited the area. It at least offers an unusual field for investigation. I have placed my own collection of artifacts from the region in the museum of Western State College of Colorado where it may be studied in connection with subsequent work that may be undertaken in the Valley.

C. E. HAGIE,
Professor of History,
Western State College of
Colorado, Gunnison, Colo.



ARTIFACTS AND SCRAPS OF HUMAN REMAINS TAKEN FROM THE SAND DUNES BY PROFESSOR HAGIE.

ART AND ARCHAEOLOGY



THESE INDIAN PICTURE WRITINGS ARE TO BE FOUND ON THE PRINCIPAL ENTRANCES TO THE VALLEY FROM BOTH EAST AND WEST.

EXHIBIT OF ART TREASURES IN ROME

Through the courtesy of his Excellency, Nobile Giacomo de Martino, Royal Italian Ambassador to the United States, ART AND ARCHAEOLOGY is able to announce that "the Ministry of National Education has formed an exhibit in Rome of those art treasures which, during the past ten years from such diverse sources as excavations, acquisitions, gifts, etc., have greatly enriched the public collections of Italian antiquity and art. The Exhibition was opened in April, and as many of the objects had not previously been seen by the public, the importance to both students and the general visitor may be imagined.

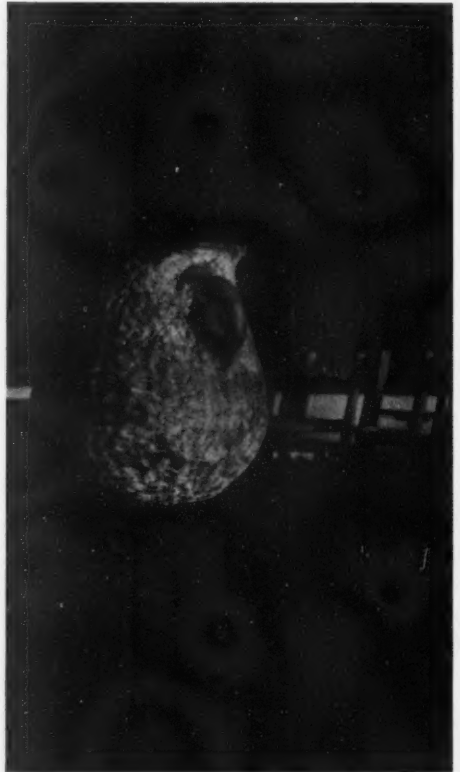
"To give an idea of its importance it is necessary only to name certain of the treasures which figure in the Exhibition. Among them are the greater part of the precious silver objects recovered by the excavators from the House of Menander in Pompeii. Known somewhat already through the publication of news items and photographs [See ART AND ARCHAEOLOGY, Vol. XXXII, No. 5; November, 1931], these silver pieces have aroused the liveliest interest of the entire archaeological world. As a group they may be regarded as comparing worthily with the noted Boscoreale treasure in the Louvre. The great statue of Diomedes from Cumæ, the Amazon from Baia and, among the bronzes, a magnificent head of Apollo from Salerno, besides numerous other objects of great value, give an adequate idea of the marvellous finds which have come to light during the past few years in Campania.

"To these objects must be added the most recent finds from Minturno, recovered during the excavations promoted by the International Association for Mediterranean Studies and the University of Pennsyl-

vania Museum, directed by Professor Amedeo Maiuri, with Dr. Jotham Johnson as excavator in charge. Other notable attractions of the Exhibition are the gatherings of the most beautiful vases and funerary objects discovered in the tombs recently explored in the necropolis of the city of Spina; ceramics from Centuripe, some indigenous to Muxaro and some stamped and inscribed with *graffito* from the necropolis of Mussomeli; certain head-reliefs and a splendid marble sarcophagus of Attic-Roman origin bearing reliefs of children, found at Ostia; the figure of the High Priest of Cybele, recovered from the necropolis of Portus Romæ in 1931.

"It must be added that the University of Pennsylvania Museum has generously offered to send certain of the objects most representative of Chaldean civilization found in the excavations at Ur by the joint British Museum-University of Pennsylvania Museum Expedition. Rome will thus have on exhibition the most notable examples of the famous jewelry of Ur, to say nothing of the bronze ornaments from Persian Luristan, from Beisan, and the famous treasure of Meikop.

"Not less interesting and important than the antiquarian section, is the part devoted to mediæval and



A POT TAKEN FROM A HABITATION SITE ON BIG SPRING CREEK IN SAND DUNES OF SAN LUIS VALLEY, RESTORED BY PROFESSOR HAGIE.

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modern art, with a showing of many masterpieces acquired in recent years by the already rich collections and galleries of Milan, Venice and Florence. The participation of the Italian colonies is also assured by the sending of the most important recent archaeological finds from Cyrene, Tripoli and Rhodes."

FRANCO-AMERICAN EXCAVATIONS

Last November 25 a "convention" was signed between the University of Toulouse, France, and the Smithsonian Institution of Washington, covering a period of ten years and having for its object international cooperation in the excavation of certain prehistoric sites in the Midi. For the University the pact was signed by its Rector, M. Gheusi, while Mr. J. Townsend Russell (of the Archaeological Society of Washington) represented the Smithsonian, and an attaché of the American Embassy in Paris witnessed the document in testimony of American public interest. Work was carried on by Mr. Russell all last summer, with the aid and counsel of the Count Bégouen, Professor of Prehistoric Archaeology at the University, and one of the most noted of French scientists. Mr. Russell excavated successively the caves of Marsoulas and Roque-Courbière. The finds in themselves were not important, but the international understanding and amity thus given practical form were of the utmost significance and beyond question laid the foundations for further cooperation and mutual study. That the French scientific authorities fully recognize this is demonstrated by a careful and scholarly article published in the Easter issue of the *Bulletin des Amitiés Franco-Etrangères* by Count Bégouen. In this calm and logical article, written with the very highest authority, the attacks of those who complained of the granting to any foreign institution of the right to excavate on French soil are disposed of with dignity, and the advantages to both countries shown to outweigh any other considerations.

THE CHACO CAÑON ARTICLE

In other pages of this issue appears a thoughtful article by Dr. Hewett. It is all well worth the while of everyone who has any regard for the meaning of history, whether written or inchoate. But it is in his final paragraph that Dr. Hewett gives concrete expression to the ideal which should, and often does, animate every true archaeologist. Discoveries of ancient facts may be exceedingly interesting in themselves. They may be sensational. They frequently give us new types or expressions of beauty, or of the faith of man in something finer than the material. But mere facts, whether ancient or modern, are valueless in themselves. Facts become of value, and make progress possible, only as we apply what they teach us to the problems we ourselves face. Archaeology that concerns itself with nothing more than discovery does not speak the final word. When, on the contrary, it philosophizes its discoveries and applies them to our own needs and desires, it elevates the general intelligence, helps to create greater safety and comfort, and justifies our faith by most practical demonstration.

"SUMMER IN GERMANY"

A valuable little pocket booklet has just been issued in English by the German State Railways under this title, giving a calendar of all the principal events of interest transpiring in Germany from May 1 to October 15. Music, art, letters, sports, all sorts of activities are

included. The record goes day by day, each event being listed under the name of the city where it occurs. The type is clear and good, the bible paper on which the brochure is printed makes the 174 pages light, and the attractive format all make this one of the most comprehensive, concise and useful guides imaginable. It may be had by addressing the German Tourist Information Bureau, 665 Fifth Avenue, New York.

CORRECTION

Notice of copyright was unfortunately omitted from both reproductions of the picture of George Washington by W. S. Conrow published in the March-April issue of ART AND ARCHAEOLOGY. The painting is owned by the George Washington Life Insurance Company of Charleston, W. Va., which also owns the copyright. ART AND ARCHAEOLOGY regrets the omission of the proper credit.

CUAUTEMOC AND MONTE ALBAN

In two recent issues of the Mexican daily *Excelsior*, dated March 23 and 24, Mrs. Zelia Nuttall, the noted Americanist, sets forth her reasons for thinking that the splendid tomb discovered this spring at Monte Alban may be the sepulchre of the illustrious defender of Tenochtitlán. The articles are too long to present in this issue, but a summary of them will appear in the July-August issue, out July 20.

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BOOK CRITIQUES

The Ayar-Inca. By Miles Poindexter. Vol. I. Pp. xxii; 274. 64 illustrations. Vol. II. Pp. xii; 358. 45 illustrations. Horace Liveright, New York. \$10.00.

The most complete compilation ever made on all fantastic, incongruous and superficial theories which have been launched as to the origin of the American Indian. It is evident that the author started out with a preconceived theory, and then indiscriminately collected all the data which was in its favor, completely overlooking arguments which were in opposition. The writer shows much undigested reading and lack of judgment.

In the very first chapter we find strange and unscientific methods of reasoning, as when the writer wants to prove the connection between the Quichua Indians of Peru with the Quiche of Guatemala. He states that the word "Quichua" is probably based on the root *ichu*—"coarse grass of the mountain ranges"—and asks us to note that the Quiche word *ichah* means edible plant, which seems to be a quite flimsy foundation from which to draw any definite conclusion.

As long as Mr. Poindexter describes the country and its ruins he is interesting and his illustrations are good, but the further one works one's way through the first volume the more fantastic the reading gets, until it climaxes in the second volume, becoming chaos.

In speaking of the land of origin of the Nahuatl tribes, the famous Hue-Hue-Tlapalan, he calls this the "colored (or tinted) land of the Ancient people". This, no doubt, is in the sense of the land of origin, i. e., where the forefathers of the race lived and the author states that "*hue* in the Maya tongue meant egg". In reality, *hue-hue-tlapalan* is a Nahuatl (Aztec) word. *Hue* means large or old; when doubled, it means very large, or very old; *tlapalli* means red, and *tlan* is a suffix indicating place, the translation being very "old red place", so why not call it Hell? Finally the Maya language has no word *hue*. Egg is *he* in Maya. And so forth and so on.

The chapter headings lead one to suspect that the writer really would like to prove that the American Indian originated from the "white race" if not from the English. "Asiatic Place Names in America"; "Sanskrit and Sumnerian Roots of Quichua Words", "Aryan

Speech in Ancient America"; "The Aryan Place-Name Suffix in Mexico and Peru"; "Aryan Adjectival Inflection in Quichua", "Eskimo and English"; "English Words in the Maya Language"; "The Kinship of the Ayar-Inca Religion With our Own"; etc., etc., *ad infinitum*; and so much of this fantastic stuff, mostly based on antiquated authors, that it is impossible to go into detailed review of the work. Those who write fantastic syndicate stories will find a gold mine in the two volumes; those who seek knowledge will be confused; those who have studied in earnest will laugh.

FRANS BLOM.

Chinese Textiles. By Alan Priest and Pauline Simmons. Pp. x; 88. 39 illustrations. Metropolitan Museum of Art, New York, 1931.

This is a useful little handbook, the more welcome as Chinese textiles have but little been studied. The manner of cooperation between the two authors is not indicated, but it stands to reason that Miss Simmons is responsible for the technical investigations, and her explanations of the weaves and embroidery stitches form the most interesting part of the booklet. The explanations of the symbols are not always happy or accurate and follow the time-honored traditions. The "Hundred Antiques" (pp. 53, 59, 62), for instance, is one of the many specters which has haunted the students of Chinese art for years. The word *po* in the term *po ku* is not the word for "hundred", but the one meaning "wide, extensive, learned, cultured" (Giles Dictionary, No. 9372), while a combination like "hundred antiques" does not exist in the Chinese language.

It is very improbable that brocade is a Chinese invention (see *Sino-Iranica*, p. 488). It is not intelligible why the authors speak of "the exotic goldfish" of Chinese gardens (p. 82). The Chinese were the first who domesticated the goldfish, which is a native of China, and from there it spread to all other parts of the world. The bibliography is curious. Bushell's *Chinese Art*, which contains a good chapter on textiles, and d'Ardenne de Tizac's publications are not mentioned. As a guide for the study of the special exhibition in the Metropolitan Museum this handbook is excellent, but it is far from giving a complete account of Chinese textiles or costumes. There is no mention of

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an example of a silk dress painted with designs or scenes in colors, none of the gorgeous uniforms of the palace guard-officers, and no temple robe for clothing the statue of a god.

B. LAUFER.

The Divine Comedy of Dante Alighieri. Translated by Jefferson Buller Fletcher. Pp. xxii; 471. 14 plates. The Macmillan Company, New York. 1931. \$5.

Whether or not Professor Fletcher has written the ultimate English version of Dante no one can say, of course. Perhaps the perfect version, the singing, subtle, intense epic with a flow as resistless as it is lyric, will never be written. This reviewer knows of one translation now approaching completion which runs in tercets and is a noble work of both poetry and scholarship. But it is not quite perfect, for it is not quite Dante. Professor Fletcher's *Divine Comedy* is, so far as a non-musical but sonorous tongue can be the reflection of the most mellifluous and lyric, and so far as one verse form can represent another.

In his careful introduction, which is delightfully unaffected and informal, Professor Fletcher states the case for all English renderings clearly. To anyone who has labored through the groundswell undulations of Cary or skidded upon the frozen mechanics of Longfellow, the present version, with its two-thirds rhyming but unlinked tercets, has freshness and vigor as well as a genuinely lyric quality that is inspiring. For one who knows his Italian original, too, Professor Fletcher's rendering is of unusual interest because of its scholarly accuracy and the happy facility of the English employed. Contrast, for example, Dante's melodic *terza rima* in opening Canto IX of the *Inferno*—

*Quel color che viltà di fuor mi pinse,
Veggendo il Duca mio tornare in volta
Più tosto dentro il suo nuovo ristrinse.
Attento si fermò, com' uom ch' ascolta:
Che l' occhio nol potea menare a lunga
Per l' aer nero e per la nebbia folta.
Pure a noi converrà vincer la punga,
Comincio ei, se non. . . .*

—in all its pellucid clarity, where every word is not alone the only word but the one most lyrically apposite, with Cary's rendering:

*The hue which coward dread on my pale
cheeks*

*Imprinted when I saw my guide turn back,
Chased that from his which newly they had
worn,*

*And inwardly restrain'd it. He, as one
Who listens, stood attentive: for his eye
Not far could lead him through the sable air,
And the thick-gathering cloud. "It yet be-
hooves*

We win this fight", thus he began:

This, of course, is not Dantesque but Miltonic in its atmosphere, verbiage and prosody. There is at times a deadly heaviness to Cary, with a regularity of cadence which is as monotonous as the marching of troops on parade. Set against these two as background, Fletcher's version, it seems to me, not only as regards this passage but throughout the whole amazing poem, is much closer to the liquid flow of the original. Thus by preserving the spirit and atmosphere of Dante, while also avoiding the dangers of monotony in either rhyming or blank verse throughout, Professor Fletcher achieves a very definite mastery of his own. There is no weariness in reading—

*The color cowardice impressed on me,
Seeing my Leader so turn back, repressed
His own new color the more speedily.
He stopped attentive, as a man who lists,
For that the eye could not direct him far
Through the black air and through the
heavy mists.
"Yet it shall fall to us to win this fight,"
Began he, "else . . .*

Space forbids further citations or comparisons, but the simple directness of this new version, its dignity, charm and the absence of distracting footnotes all tend to convey the impression of a much fresher beauty and greater power than appear in any other English equivalent. To those unable to read the original, there is the joy of discovering the greatest poem in the world in the pages Professor Fletcher so modestly designates only as a "translation."

ARTHUR STANLEY RIGGS.

David Octavius Hill. By Heinrich Schwarz. Pp. 67. 80 plates. Viking Press, New York. 1932. \$7.50.

For all art lovers this is a commendable book. It is well-written, well-printed, exhaustive as to fact, complete in bibliography and notes on the pictures, and fascinating in

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its demonstration of the earliest use of photography as an art medium. In Hill's portraits we feel the old glamour of the "grand manner"—he comes close after Raeburn—and the nobility of the human type not yet vulgarized in the thought-mold of the industrial age. Than these portraits of Hill's it is safe to say nothing better has been done in photography. Hill was a Scotch landscape painter of meagre fame but not unsuccessful. He aspired to portrait painting, in fact it was his daring project of a great portrait group such as Hals and the Dutchmen had done, that turned him to the new magic of photography. He worked in collaboration with the young chemist Robert Adamson, science aiding art. The mechanical problem solved, Hill, the painter, seeing his picture, posing his models to fit his concept, making his studies of character, achieved masterpieces in soft gradations of light in values and textures subtly found. There are no crudities, no overemphasized intensities. Perhaps the supreme quality of these portraits lies in the volume, the roundness of the forms, in the depth of the images. These are authentic masterpieces of portraiture in the fine tradition of English portrait painting down the long line from Holbein through Van Dyck to Sir Joshua, Gainsborough, Romney and Raeburn. Hill had not the skill to paint such portraits but he could and did conceive them and direct the sun and his chemicals to paint them for him in a new art medium. One can scarce believe that Corot never saw Hill's *Young Woman* nor that Whistler was unaware of his *Mrs. Anne Rigby*.

David Octavius Hill was born in the old royal town of Perth in the year 1802. His father was Thomas Hill, a publisher. He put out thirty sheets of lithographs by the son in 1821, sketches of scenery in Perthshire drawn on the stone. Hill studied landscape painting under Andrew Wilson in Edinburgh, and exhibited in 1823, the year Raeburn died. Influenced by Turner, his landscape is romantic, of castles and ruins and sunsets. He was secretary of the Scottish Academy of Painting, Sculpture and Architecture when he died in 1870. His tomb in the Dean Cemetery, Edinburgh, has a bronze bust by his wife, the sculptress Amelia Robertson.

A. BURNLEY BIBB.

Dialogues with Rodin. By Helene von Nostitz Hindenburg. 84 pages. 10 drawings,

one in color. Duffield and Green, New York. \$3.75.

This record of talks with Rodin during his visits to the writer, herself a musician, in her Italian villa and during her sittings to him for her bust, has the freshness of all first-hand impressions, and possesses real value for that reason.

The great care Rodin took with measurements, the reiteration of sketches, by which he made himself familiar with the character of her head, and the preliminary bust cast in plaster, are all illuminating to the student of this difficult art; and should give the casual critic pause when he lightly criticises the final work in marble.

"Even though I do not go very far," he says, "at least I love creation with all my strength."

This impression is confirmed as one looks at the sketches that illustrate the text showing how he lived in his work and talked, pencil in hand.

It should be in the library of every lover of his work.

R. TAIT MCKENZIE.

Background With Figures. By Cecilia Beaux. Pp. xi; 355. 27 illustrations. Houghton Mifflin Co. Boston. 1930. \$5.00.

Miss Beaux in this delightful autobiography reveals herself as skillful in word-painting as she is in the other arts. One is so fascinated by the absorbing story of her childhood and youth, her family and earliest education, that one moves on slowly to her later brilliant career.

Her school days, which she describes with intellectual and deep appreciation, the months and years in Belgium, France, England and Italy, interesting contacts with artists and distinguished people, always with gentle comments on the work of her associates in the various schools she attended beginning in Philadelphia and embracing the leading studios abroad, make a daily chronicle of incidents and episodes, told with simplicity but rare intellectual expression.

She writes that her "first glimpse of Italy has never ceased to warm her mental vision, its sunlit particles are still glowing in the dark corners of consciousness". Her experiences in painting the portraits of famous and distinguished personages are given with absolute lack of self-consciousness, though the re-

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sults stand with the best art creations. The people she knew—Sargent, Winslow Homer, Abbott Thayer, Paderewski, Theodore Roosevelt, Henry James and many others—are all woven into the story with interesting anecdotes and comments. The painting of Mrs. Roosevelt and her daughter in White House was one more unusual experience, and the chapters describing the war portraits of Cardinal Mercier, Clemenceau, Admiral Lord Beatty, are of the deepest interest and take their place as historical documents.

She says of the Adams memorial by St. Gaudens in Rock Creek Cemetery, Washington: "That small fir-surrounded hemicycle contains the rarest exposition of thought, on Destiny, that plastic Art has ever achieved".

It is difficult to do justice to so unusual and valuable a book in a brief review, but it is, as one writer says, "impossible to read it without being impressed by the qualities of character and sensitiveness to beauty which have been the determining elements in the life and achievement of the artist author".

HELEN WRIGHT.

Excavations at Eutresis in Boeotia. By Hetty Goldman. Pp. xxi; 294. Plates xxi; Plans IIc. Harvard University Press, Cambridge, Mass. 1931. \$15.00.

In this handsome volume Dr. Hetty Goldman describes in a most systematic and scientific manner the remains uncovered by her at Eutresis. The rich prehistoric material is exhaustively presented in the first six chapters, while the classical remains are studied separately in the seventh chapter. The houses uncovered definitely prove that the quadrangular was the only shape at Eutresis in EH. times, as it was at Zygouries and Hagios Kosmas in the same period, and that the apsidal shape was introduced in MH. times and apparently by new tribes. This evidence is most important since some uncertainty exists about the EH. remains of the neighboring site of Orchomenos. The pottery is treated in a most thorough and scientific way. The stratigraphical evidence so carefully observed enabled Miss Goldman to place the different classes in their chronological sequence and thus to establish an accurate chart of the prehistoric pottery of Boeotia. The material is masterfully described and perfectly illustrated by numerous photographs, plates, and

drawings. A very interesting and important summary of the evidence obtained at Eutresis is given in chapter six.

We can make but very few remarks. The sherd illustrated in figure 267 and reconstructed as a tripod in figure 268, belongs to a four-legged pot of a zoomorphic shape and of unknown purpose, and not to a tripod. At Hagios Kosmas we found three almost complete pots identical with the one from Eutresis. We cannot accept the belief of the author that the Asiatic provenience of the Minyan culture is strengthened by the finds of Eutresis. The elements on which this belief is based, clumsy pots, cups, mottled ware, etc., are found in Greece in EH. times and it is more probable to suppose that the MH. potters learned them from their predecessors. The work as a whole is an excellent and most welcome contribution to our knowledge of prehistoric Boeotia. It will be indispensable to prehistorians and very essential to interested students. In short, the book is one of the few which can hope to remain a *κτῆμα ἐς αἰ.*

GEORGE E. MYLONAS.

Italian Pictures of the Renaissance. By Bernhard Berenson. Pp. xii; 724. Oxford University Press, London and New York. 1932. \$4.50.

It is hard, within the limits of a necessarily tabloid review, to be quite fair to this new credo of Mr. Berenson. Sheering away from his previous attitude, as marked by earlier lists, he has broadened both the scope and the purpose of this invaluable catalogue. In his brief but admirable Preface he states very well his reasons for including "not only pictures which the artists painted with more or less assistance, but such as were turned out in their studios from their designs, and even copies as well, providing they faithfully transcribe lost works". All the works not "absolutely autograph pictures" are clearly indicated, and the voluminous list is greatly enriched by the additions. The art lover who may not agree with Mr. Berenson, who has put a lifetime of study, research and discovery into this miniature encyclopaedia, must study all of the twelve pages preliminary to the catalogue proper. "Mature interest," the author observes in the middle of his Preface, "leads one at least as much to the mind of the artist as to his hand."

A. S. R.

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Peruvian Textiles. Chronology of Early Peruvian Cultures by Philip Ainsworth Means, and an introduction by Joseph Breck. Pp. 27. 24 plates. Metropolitan Museum of Art. New York. 1930. \$1.50 bound in paper. \$2.00 with cloth binding.

There is a widening interest in the art of so-called primitive peoples. Even archaeological museums are reshaping their exhibits to exclude materials without art significance and, on the other hand, art museums are increasing their exhibits of aboriginal art. It is in keeping with this movement that the Metropolitan Museum of Art issues a booklet dealing with prehistoric Peruvian textiles, handsomely illustrated. Twenty-four full page plates present twenty-seven textile types, each accompanied by a descriptive statement as to the prehistoric culture represented, the assumed date of origin, probable use of the textile, the weave, material, design, color, and lastly size. The plates are clear and on a scale sufficient to reveal the detail of design and technique. The culture periods represented are for the highlands, Tiahuanaco II, and examples dating from 600 A. D. to 1000 A. D.; the other textiles are from coast cultures, early and late Nazca, Tiahuanaco II, and late Chimú. The last, according to the judgment of the author, ranges from the third to the fifteenth century A. D. The preliminary text outlines the author's cultural chronology for the Andean area and his characterization of each culture; the territorial relations of these cultures are made clear by a simple sketch-map. This attractive treatise can be heartily recommended to students of primitive art desiring an introduction to Peruvian textiles.

CLARK WISSLER.

Frank P. Chambers'

THE HISTORY OF TASTE
an account of the revolutions
of art criticism and theory in
Europe is now ready. Illustrated. Price, \$4.25. Columbia
University Press, 2960
Broadway, New York City

THE CAVES OF AJANTA

(Concluded from Page 136)

nave. The only plain ones are those behind the *dagoba*, the others all having four-armed bracket-dwarfs over the capitals, while the projecting frieze over the architrave is divided into elaborately carved compartments. The *dagoba* itself is a vast collection of Buddha images, the central one seated on a lion-throne with his feet on a lotus, upheld by two small figures with *naga* canopies. The dome is compressed, and the carving consists of standing and seated Buddhas alternating with *apsaras*, heavenly dancers, whose sweeping curves are suggestive of flight. Even in this ornate sculpture gallery there is some unfinished work, such as the commencement of a Buddha, whose still-birth was probably due to the onthrust of Hinduism about the eighth century A. D., when Buddhism was chased off the stage of India's history.

The Government of H. E. H. the Nizam of Hyderabad has evinced the greatest interest in the preservation of Ajanta's art heritage and, in 1914, an Archaeological Department was constituted for this purpose. Facilities have been provided for visitors by the construction of roads and rest-houses, and the publication of guidebooks. Neither expense nor trouble have been spared and, at the suggestion of the Finance Minister, Sir Akbar Hydari, Nawab Hydar Nawaz Jung, two specialists—Professor Cecconi and his assistant Count Orsini—visited Ajanta for the purpose of restoring the paintings, while Monsieur Foucher devoted much time to their identification. The pictures which, before conservation, were apt to turn to dust at the slightest friction, are now so hardened that there is a prospect of the caves of Ajanta continuing to be a vital memorial of India's ancient art work for very many years.

The warm thanks of the writer are due to Sir Akbar Hydari, Finance Minister of Hyderabad State; to Mr. Ghulam Yazdani, Director of Archaeology, Hyderabad State; to Mr. Syed Ahmad, Curator of the Ajanta caves, and to Dr. E. H. Hunt for permission to use the photographs reproduced here.

WHEN YOU GO ON YOUR VACATION

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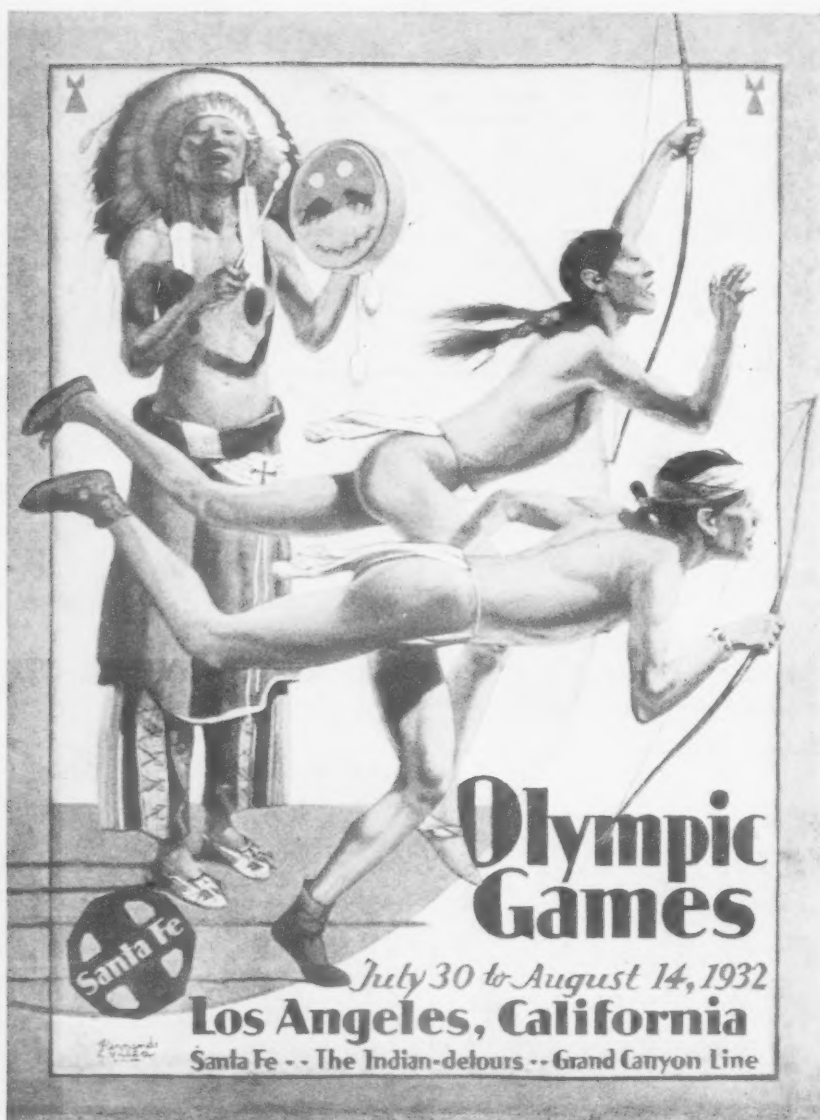
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